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PALEO

for lifters

by Justin Lascek

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Preface

Thank you for purchasing this e-book. I sincerely believe that it can provide a good summary review on quality nutrition for performance, health, and longevity.

I hate the idea of putting myself on the cover of this book, yet I think it's important because I practice what I preach. I actively teach people the principles of anatomy, physiology, strength, conditioning, mobility, and nutrition to make them perform well, look good, and ideally keep doing both of those things into old age. I consistently maintain a body weight between 210 and 215 with a body fat percentage lower than 10% while remaining strong, conditioned, and athletic. Make no mistake: performance is the goal for me and 70's Big readers. Yet I believe a man should be physically admirable, like a Greek statue, while retaining multipurpose athletic ability. It is my aim that the nutrition principles in this book will aid you in your performance, aesthetic, and health goals.

The tone of this book is informal. Most of what I say is based on proven methods – whether scientifically or practically – but I infuse a lot of my own opinion throughout the book. There will be naysayers and nitpickers; they are free to disagree. But everything I say in this book is backed up with a logical argument and practical experience. I can probably curl more than the average naysayer too.

This book will not include meticulous scientific information. Suggestions will not be validated with explanations of biochemical processes nor will peer reviewed research studies be cited. There are other books for that. I highly suggest that you read Dr. Loren Cordain's "The Paleo Diet" and Robb Wolf's "The Paleo Solution". Each of those books will lay out a case for why Paleo eating is optimal for health. I also suggest reading "Good Calories, Bad Calories" by Gary Taubes and "The Great Cholesterol Con" by Anthony Colpo to gain an understanding of why fat is not bad and why abuse of carbohydrates is. I also highly recommend reading the following websites; Mark Sisson's Mark's Daily Apple and Lyle McDonald's Body Recomposition. All of the above sources have been integral in developing my knowledge and implementation of nutrition and diet, and all of the authors are much smarter than I am.

Instead, *Paleo for Lifters* will be mostly conceptual in nature. It will not include an exact meal plan because it aims to teach the reader autonomy. Just as with strength and conditioning programming, nutrition is dependent on the individual and benefits from creativity. This book should provide you foundational information with guidelines so that you can create your own quality nutrition plan. While you are free to skip around, I recommend reading the book straight through as each chapter builds on the previous one.

Thank you again for buying this e-book. Train hard and eat well.

--Justin Lascek, January 2013

Chapter 1 – Introduction

The history of nutrition and strength training has roots in hearty caloric-dense meals – with good reason. Strength training places a toll on the body that requires adequate amounts of protein, carbohydrates, and fat. There are stories from strength training legends that talk about how young, hard training men would go to the local diner for cheeseburgers and milkshakes to recover from training. Other stories detail the amount of eggs, milk, cream, ice cream, and protein powder that they would throw into their shakes. This is what was believed to be necessary to get bigger and stronger, so that's what you should do too. Right?

The old school nutritional paradigm is based on the misconception that dirty foods are the only foods that can help someone gain muscle and get stronger. The mindset probably evolved from the stories told in powerlifting magazines of super heavyweights. After all, the heaviest guys are the strongest guys, so their dietary habits are naturally highlighted. While a lifter like Lamar Gant is impressive, his 688lb deadlift at 132lbs pales in comparison to Bill Kazmaier's 886.7lb raw deadlift, albeit at a body weight of over 300lbs. Furthermore, the impressive eating stories printed in strength training literature typically highlight young men during pubescent training. Teenagers and young adults have fiery metabolisms due to their high testosterone levels and are able to convert massive amounts of calories into solid muscular gain.

Every adult in Western society soon finds out that continuing their teenage eating habits will result in fat accumulation through each passing decade. As someone gets older, their metabolism slows and their body adapts to stress more slowly. "Body fat is 90% diet," is a common phrase that has risen from trainees that are disappointed with their body composition despite hard training in the gym. Lean, athletic physiques require a lot of effort and will power.

Quality food doesn't just yield a lean physique; it plays a role in how efficiently the body works. There will always be new fad diets that claim to lose weight quickly and easily – nutrition is a habit that is extremely difficult to change and capitalizing on laziness funnels money to pseudo-nutritionists. There have been huge nutritional advances in the last two decades that are yet to permeate mainstream nutritional and fitness knowledge or even acceptance. It is possible to combine the lessons from unconventional nutrition knowledge with strength and conditioning to create an efficient dietary approach that will provide enough calories for recovery and gaining muscle without superfluous fat gain. *Paleo for Lifters* will show how to do this in a variety of scenarios with guidelines.

Chapter 2 – Nutrition Basics

Nutrition and diet are complicated things. There are thousands of different sources saying millions of different things. Every few years there is a new fad diet that claims to help drop body fat quickly. Yet despite alleged improvements in knowledge, western society continues to grow fatter every year. It's apparent that authoritative sources are not doing their job when it comes to healthy dietary recommendations.

In addition to ineffective information and authorities, diet is a habitual thing. Daily food choices aren't made for health reasons, but convenience and taste. The last 100 years have seen amazing advances in food availability and technology. Instead of eating locally grown whole foods, most people consume processed foods from stores or restaurants. Convenient food availability also creates the concept of psychological eating; thousands of choices allow for selecting food based on comfort and how it makes a person feel. And when these people want to make a change to improve their physique or health, the available information is fair at best.

If you have bought this book, then you've been under a barbell before. You know that grinding out heavy sets of squats is inherently hard, but you make a conscious decision to do it regularly in order to improve. Eating a healthy diet is harder. Your daily routine, psyche, habits, and convenience have created your existing diet. Making changes, especially on a grand scale, takes conscious effort and motivation. If you have been chronically eating poorly, the transition to healthy eating will be even more difficult. Your blood sugar and hormones respond to your diet, and it's possible you have dug yourself into a hole. The longer you've eaten like crap, the bigger the hole.

Unhealthy and fat people usually talk about "going on a diet." Yet the term *diet* is derived from the Greek word *diaita* and later the Latin word *diaeta*, both meaning "way of life." The goal of *Paleo for Lifters* is to give you a true diet that you can use through the rest of your life.

It takes big hairy balls to immediately convert into a healthy diet indefinitely. We'll learn that the body wants to remain in homeostasis. When big changes are made the body is confused, feels like crap, and gets lethargic and intolerable. Before we learn about how to eat a Paleo-based diet, let's look at the basics: physiology and food.

Physiology Basics

In order to understand the effect of food on the system, it's helpful to understand the very basic, conceptual "Stress Adaptation Syndrome." It was introduced by Dr. Hans Selye in a short article in *Nature* in 1936, and it basically states that all organisms have an acute response and subsequent chronic

adaptation after being exposed to sub-lethal stresses. In other words, when a person undergoes a stress that doesn't kill them, there will be an immediate response from the body followed by a recovery and adaptation process so that the body can handle that same stress more easily in the future. The adaptation allows the body to handle a greater quantity or duration of the stress, though the quantified amount is arbitrary. Stressors can be psychological or physical, but in this book, we are focusing on the physical.

Note that this process can either occur with the presence or lack of a stress. For example, loading the skeleton with a twenty pound backpack would result in an adaptation of increased bone density in an untrained individual. However, if an active untrained individual adopts a sedentary lifestyle of sitting around, they will adapt to a lack of stress by decreasing bone density and musculature since there isn't any stress that is causing those structures to maintain or increase density or size. In other words, not doing anything makes you weaker and more fragile (and this is why exercise is important for longevity).

Stressors can have an acute and systemic response. If my thighs chronically rub together, the skin friction results in the adaptation of not growing hair on the inner thigh. This is an acute response. If I perform five sets of five reps of deadlift at 85% or greater, I will experience acute soreness in the relevant structures (e.g., lower back, posterior chain, and upper back), but I will also have imparted a severe hit to my system that will result in a decreased state of readiness and recovery. If I continue pounding the body with high volume training, then I'll prevent proper recovery and get into a recovery deficit, which results in decaying performance. The term system is used to represent the body's comprehensive response that includes all of the body's systems (e.g., neuroendocrine, lymphatic).

It's clear that there is a systemic response from lifting, and the same applies to nutrition. Dr. Barry Sears put it best in *Enter the Zone* when he said "Food is a drug." Consuming a drug creates a chemical response that changes functioning of a given process in the body. The response from that stressor also results in side effects, regardless of whether they are benign or malignant. Taking any kind of drug alters the body's biochemistry and potentially does so in unseen ways; there's no way to know the domino effect of altering a single enzymatic process. Food does the same thing - every edible item you put in your mouth initiates a hormonal response. Chronically eating the wrong amounts of macronutrients in poor quality will create an unhealthy hormonal environment.

This conceptual explanation is important because food is a stressor that can have good or bad acute or systemic responses. Food is the body's fuel and will play a serious role in health, body composition, and recovery from training.

Food Basics

At one point in history, "food" consisted of things that used to be alive. Nowadays, food can be synthetic. The relevant pieces of food for nutrition include macronutrients and micronutrients. *Macronutrients* are

proteins, carbohydrates, and fats. *Micronutrients* include vitamins like Vitamin A, B, C, D, E and K, as well as minerals like magnesium, zinc, calcium, and potassium. In general, a lifter should get his macronutrients under control before even bothering with his micronutrients. In subsequent chapters we'll see that following a Paleo outline consisting of whole foods will satisfy most micronutrient needs.

Proteins

Protein is derived from a Greek word, "proteios", meaning "of the most important." On average, a human body is about 18% protein. It is an essential part of all body tissues and components including muscles, hormones, antibodies, enzymes, cell membranes, and skin. In other words, protein isn't just used for repairing and building muscle, but creating and maintaining all structures in the body. An average, non-training person would do well to consume close to their body weight (in pounds) in grams of protein; it would significantly improve their metabolism, energy levels, immune system, and subsequently overall health. However, I typically recommend that male lifters get at least 50g more than their body weight, and that the hardest training lifters increase that to at least 100g over their body weight. For example, a 200 pound male should aim to eat at *least* 200 grams of protein. The first goal for women is to get their protein intake in grams closer to their body weight, and they can later titrate it up to 30 to 50g over their body weight after observing their recovery and body composition changes. Women are more sensitive to total calories, so they may not need to consume more grams of protein than their body weight. One gram of protein is four calories.

Carbohydrates

Carbohydrates are compounds made of carbon, hydrogen, and oxygen and are therefore sometimes abbreviated as "CHO." They are broken down into either a monosaccharide (glucose, fructose, and galactose), disaccharide (sucrose, maltose, and lactose), or polysaccharide (starch, fiber, and glycogen). All carbohydrates need to be broken down to monosaccharides before they can be used by the body (which does so during energy metabolism). Glycogen is the storage form of carbohydrates in animals, and it is stored in the liver and skeletal muscle (i.e., the muscle throughout your body that creates movement). Carbohydrates are a major energy source, especially during high-intensity or long duration exercise, and the nervous system relies exclusively on carbohydrates for energy. For our purposes we will think in terms of *simple sugars* and *complex sugars*; the more complex the carbohydrate, the longer it takes to digest and be of use to the system. One gram of carbohydrate is four calories.

Fats

Fats, also known as lipids, include triglycerides, free fatty acids, phospholipids, and sterols. The body stores fat as triglycerides. Lipids make up all cell membranes and nerve fibers, are a primary source of energy, and are the building block of hormones. For our purposes they are an incredibly important caloric source and by eating a variety of quality fats we can also provide the endocrine system with supplies to make and use hormones for recovery. Animal fat promotes higher testosterone and hormone productions — fat and cholesterol are the building blocks of hormones. Eating fat also helps improve insulin sensitivity since it will usually be combined with a decrease in carbohydrate consumption and slows the absorption of carbs. Greater amounts of animal fat allow for better recovery and bulking, but they can also help a lifter become leaner by avoiding carb calories and subsequently unnecessary fat gain when trying to bulk. Aside from adequate protein, fat consumption is the best method to recover from training and stay lean. One gram of fat is nine calories.

A Word on Calories and Carbs

I'm not a zealot or a diet groupie. That might sound ironic given that "Paleo" is in the book title, but I eat non-Paleo food often enough to give hardcore Paleo folks the willies. I do this primarily to fuel my training and hobbies, but generally speaking I would want trainees to be healthy and lean before clearing them to eat less healthy food items. Different types of people will require different methods, yet they funnel into a basic concept. The food choices in a Paleo diet are of the highest quality, meat is aplenty, fat intake is high, and carbs aren't superfluous. I see it as the end goal for most people to shift into to old age with; it just makes sense that eating the most nutrient dense food sources and eliminating synthetic chemicals would yield optimal health. However, I don't hardline the rules like a zealot and am okay with having leeway. I don't support whining about feeling sick after eating a burger bun or making a group of people change their dinner plans because of being frightened over the potential gluten exposure. And when training hard, you'll sometimes need something more than what a caveman scrounged up for his hairy wife.

That's because we need calories.

High amounts of calories are often important for a lifter because the structural damage from training requires "stuff" to fix it. Practically, we know that protein fixes muscles, while fat supports cellular structure and hormone development. Making a point to eat calories will inevitably provide these macronutrients, but we would be more efficient if we ate an appropriate amount of each to ensure there is enough to do their specified jobs. Though we will aim to eat many calories, it would behoove us to eat the *right* calories. But what about carbs, specifically? They are stored in the body to be used for energy, but other than that, don't do much.

There is a stigma attached to the Paleo diet that says it is a low-carb diet. Yes, if you only eat meat, veggies, and some fat, there are very few carbs in those food items. But last I checked, "Paleo" encompassed types of foods that don't cause problems in the body. Potatoes fit into this category. Fruit, while harmful in consistently large amounts, fits into this category. Just because there are fewer choices for carbohydrates doesn't mean Paleo is low-carb. And if there was a Paleo God who decided what the Paleo Diet was, then I'd still commit blasphemy and say: you can eat a Paleo diet that isn't low-carb. And you do that by eating more carbs. Crazy talk!

People who think a Paleo diet must be "low-carb" are the same people that need to be told exactly what to do every day in the gym; they have difficulty learning foundational information and applying it to their training. In *Paleo for Lifters* we aren't going to abuse carbs, but we sure as hell aren't going to go "low-carb" and induce ketosis. Ketogenic diets may have utility in improving insulin sensitivity and body fat, but not for increasing performance or recovering from training (we'll revisit this later in the chapter).

Common Food Choice Information

Here is a short list of foods and their corresponding macronutrients. Knowing these basic values will give you an idea of how much of a given macro is actually in what you eat.

Protein Sources

Meat – An ounce of meat has about 6 or 7 grams of protein. Each pound of meat has about 100 to 110g of protein. Fat content can vary. No carbohydrates.

Eggs – Each egg has about 6g of protein, or 7g in large eggs. Half the protein is in the yolk, as well as all the fat and vitamins. The yolk will have about 4.5g of fat and 200mg of cholesterol (which will help with hormone creation). No carbohydrates.

Nut Butters – Have a little bit of protein, but not enough to matter in daily estimates. Some carbs.

Nuts and Seeds – Have a little bit of protein, but not enough to matter in daily estimates. Some carbs.

Carbohydrate Sources

Sweet Potatoes – Each has about 25 to 40g of carbs for medium to large potatoes respectively. Minimal protein, no fat. Sweet potatoes have more Vitamin A than other potatoes.

White Potatoes – They have more carbs than sweet potatoes and will have more of a blood sugar and insulin response. There is about 30 to 60 grams of carbs in small to large potatoes respectively. Minimal protein, no fat.

Apple – There are about 25g of carbs in a medium sized apple.

Banana – Each medium banana will have about 30g of carbs.

Orange – Each medium orange will have about 35g of carbs.

Berries – A cup of mixed berries will have about 15 to 20g of carbs.

Fat Sources (with calories, since we will eat fat for additional calories)

Coconut Oil – 14g of fat for 126 calories per tbsp. Mostly saturated fat.

Olive Oil – 14g of fat for 126 calories per tbsp. Mostly unsaturated fat.

Avocado – 22g of fat for 198 calories for a medium avocado. Mostly unsaturated fat.

Almonds – 14g of fat and about 160 calories per ounce (carb/protein content increases total calories).

Peanut Butter – About 15g of fat and about 170 calories per ounce (carb/protein content increases total calories).

Macronutrient Intake Recommendations

My good friend Gant Grimes likes to repeat an old training adage: "Eat enough protein to support or increase lean body mass, eat carbohydrates to match activity levels, and eat enough fat to recover." This is the premise behind any lifter or athlete's diet, and the foundation for this book.

Protein intake has rigid intake boundaries. I will defer to Dr. Mauro G. Di Pasquale:

> "…for those athletes involved in strength events such as the Olympic field and sprint events, those in football or hockey, or weightlifters, powerlifters, and bodybuilders, I recommend between 1.2 and 1.6 g of high-quality protein per pound of total body weight. That means that if you weigh 200 lb and want to put on a maximum amount of muscle mass, then you will have to take in as much as 320g of protein daily. There are several competitive weightlifters,

> powerlifters, and bodybuilders that I know who take in 2-3 g of high-quality protein per pound of body weight.
>
> If you are trying to lose weight or body fat it is important to keep your dietary protein levels high. That is because the body oxidizes more protein on a calorie-deficient diet than it would in a diet that has adequate calories. The larger the body muscle mass, the more transamination of amino acids occurs to fulfill energy needs. Thus for those wishing to lose weight but maintain or even increase lean body mass in specific skeletal muscles, I recommend at least 1.5g of high-quality protein per pound of body weight. The reduction in calories needed to lose weight should be at the expense of the fats and carbohydrates, not protein (1)."

If a male aims to get about 50g of protein more than his body weight in pounds, he will be on the low end of what Dr. Di Pasquale indicates above. But Di Pasquale's lesson is more important than pointing out protein requirements for athletes; he emphasizes the importance of a) protein over carbohydrates and fats, b) the importance of protein during body fat loss, and c) the quality of protein. Chapter 3 will discuss the importance of quality.

You will notice that there are not any hard recommendations for carbohydrate or fat consumption. Intake for these macronutrients is heavily dependent on the individual and their goals. What is the trainee's current body composition? Is the trainee trying to alter body composition or weight? What is their primary training modality? How have they been progressing? All of these things will determine carbohydrate and fat intake.

Conventional wisdom dictates carbohydrate recommendations that are too high and fat recommendations that are too low. Later we'll see how basic modifications to diet will balance this discrepancy as well as intake recommendations relative to trainee type.

Carbohydrate intake is heavily dependent on the amount of endurance training a lifter includes. Lifters do not actually require a lot of carbohydrates to fuel their method of training. The misconception of lifters requiring carbohydrates probably stems from the fact that simple carbohydrates are easy to eat in mass quantities to accumulate calories. The reason carbs aren't necessary for lifting has to do with the three energy systems.

The *Phosphagen (ATP-PCr) System* creates energy without the use of carbohydrates or fat. This energy system is limited to about 10 seconds of work before it can no longer keep up energy production. The *Glycolytic System* uses carbohydrates to provide energy in activity lasting less than two minutes. Finally, the *Oxidative System* (AKA Aerobic System) provides energy via fat in longer, low-intensity durations.

In a lifter's case, short efforts of moving a bar do not require carbohydrates as an energy source. Therefore, a lifter only needs to consume enough carbohydrates to maintain an arbitrary level of glycogen in the skeletal muscles; anything else is superfluous.

However, different types of training may require greater carbohydrate intakes. For example, long, slow distance endurance will require larger amounts of carbohydrates compared to a lifter because the muscle and liver glycogen is being used as a fuel. For example, if you've ever seen video of an elite marathoner crapping their pants as they are struggle to finish the last mile of the race, it represents their depletion of glycogen stores (the fecal display is just ornery "marathon behavior").

Generally speaking, the more intense and/or sustained the activity is, the more carbohydrates are needed to fuel it. A lifter does not need a lot of carbohydrates, but a person who regularly does high intensity conditioning will need more. "High intensity conditioning" is a type of endurance training that consists of very high outputs of energy in short amounts of time. In addition to CrossFit, this would also apply to most sport athletes (e.g., football, basketball, volleyball) and applied fitness trainees (e.g., military, LEO, manual labor).

When increasing the volume, intensity, or frequency of endurance training, a trainee must eat more carbohydrates. See Figure 2.1 below.

Carbohydate Continuum Relative to Activity		
Activity	**Amount**	
Lifting	Enough to maintain or increase LBM	
Lifting + Conditioning	↓	More carbs
High intensity conditioning (>2x/wk)		
High + Low Intensity		
Marathon or greater training		

Figure 2.1

This point is made to a) clarify that lifters do not need to rely on carbohydrates as a source of calories and b) show that utilizing high intensity conditioning warrants more carbohydrate consumption. In this case, "carbohydrate intake" is relative. Instead of basing it on conventional endurance nutrition advice, we are deriving intake amounts from what minimum levels the body needs and what the activity level is.

Though the intake will depend on activity level, there is a *minimum* value of carbohydrates that apply to all people. Briefly, the body does not need carbohydrates in order to survive. While glucose is important for nervous system functioning, including the brain, everything can function without consuming carbs

because the body will make glucose from "other stuff" – the specifics leave the scope of this book. 50g of carbohydrates a day is enough to stave off this "starvation mode", yet it will still produce ketosis – a state where there is a significant amount of ketone bodies in the blood stream. Ketone bodies can be used as an alternate energy source when glucose is not available.

50g will prevent "starvation mode," but it will take about 100g of carbohydrates to prevent small degrees of ketosis. This is a good minimum level for carbohydrate intake because some people don't function well in ketosis; they will feel fatigued and can't think clearly. Since we are training for the sake of performance, we don't want to have low levels of energy as a result of our diet, so all trainees will be prescribed a minimum of around 100g of carbs. If you know you can function while in ketosis – and you are aiming to reduce body fat – then you can dip under 100g, but the rest of us will use 100 as a minimum. Keep in mind that ketosis is inherently a response to not getting enough carbohydrates – it's called "starvation mode" because it isn't good. 100g of carbs a day may not be enough to have an "adequate amount of glycogen saturation in the skeletal muscles." In other words, 100g won't keep the muscles filled with an appropriate amount of stored carbohydrate to facilitate lifting performance. The more lean body mass you have, the more carbs you'll probably need for baseline levels. Still, this number probably won't exceed 150g as a minimum requirement and will probably be closer to 100g. Just keep in mind that there needs to be a minimal amount of carbs stored in the muscle, and the minimum amount to prevent ketosis may not be enough. You shouldn't have to worry about this too much because Chapter 4 will give you food requirements to prevent you from measuring everything you eat.

Maximum recommended carbohydrate amount is a fuzzy topic because it is so dependent on the training modality (as described above). Chapter 4 will show us varying strategies with carbohydrates, but there are two ways to gauge intake levels: energy levels and body fat. Remember that as the sustained activity level increases in intensity or duration, the carbohydrate content will need to increase to fuel it. If you are feeling flat in your workouts, chances are that you need to bump the carbohydrate consumption up modestly. If you are primarily a lifter and fueling sustained activity is not a concern, then your body fat is the deciding factor. Would you benefit from reducing body fat? Then eat fewer carbs and more fat (assuming the protein intake is solid). Are you too lean and need to gain a bit of mass? Modestly bump the carb intake up. Be consistent with the daily intake and gauge the difference in how you feel or how much body fat you carry. For a more comprehensive look at carbohydrate needs, check out How Many Carbohydrates Do You Need? By Lyle McDonald.

Fat recommendations are equally arbitrary; the amount will fit together with the protein and carbohydrate content. If protein is dependent on lean body mass, and carbohydrates are dependent on energy level or body fat, then the fat intake will provide the calories to make sure the system recovers. In practice, fat intake could approach .5 to 1g per pound of body weight. For a 200 pound man, that would mean 100 to 200 grams of fat, or 900 to 1800 calories. **Fat intake is the significant difference between traditional strength training diets (that are stereotypically high in carbohydrates) and a "Paleo for Lifters" approach.** If we lower the carbohydrate intake, then we *must* increase the fat intake to get enough total calories.

Personally, I've never seen anyone gain fat while using a Paleo approach and harnessing their carbohydrate intake. It is possible to gain body fat by consuming too many calories, Paleo or not, but it just doesn't happen often. The standard trainee is usually in danger of eating too little instead of too much.

Keep in mind that though these are recommendations for macronutrient intake, they should provide a guideline in your approach to daily nutrition. I do not want you counting your macronutrients or calories; I want you making good food choices that fit in with parameters that lead to your goal. Chapter 4 will help with this.

Body Composition Basics

Nutrition can affect performance, health, and aesthetics, which is a part of body composition. It's a misconception that dieting will provide the body or "figure" a person wants. Body composition is dependent on existing musculature and body fat levels. If you're reading this book, you probably already participate in compound, full body strength movements like squats, presses, and pulls. These lifts develop the musculature of the body more effectively than isolation exercise or sitting on the couch. To display this musculature, body fat levels must be low enough to show shape.

Losing body fat is very different than merely losing body weight. Weight can be lost by decreasing caloric intake and increasing caloric expenditure. However, the body's chemistry is a complex thing. Food intake (or lack thereof), exercise or training, sleep, and stress levels all have an effect on hormones that dictate body fat levels. Since there are so many factors that can influence body fat, my recommendation is to not merely expend more calories or temporarily tweak diet. Instead, I recommend improving food quality and possibly using high intensity conditioning.

There are many great sources that can help decrease body fat, but they are often complicated, require large time or effort investments, or include activity that is detrimental to someone who is training for performance. For example, I no longer recommend that people perform "fasted cardio" in the morning (e.g., waking up early to walk on a treadmill for an hour on an empty stomach). It's a huge time commitment that not only cuts into important sleep time, but it puts a lifter on their feet for up to seven extra hours a week. Inhibiting recovery by decreasing sleep and increasing activity levels is not conducive to recovering from strength training or increasing performance.

Instead of using temporary gimmicks, I prefer to use a general approach that doesn't require calorie counting or significant changes to an already established training regime. Diet is such a habitual thing that I want to turn "body composition" improvement into a learning experience that provides good eating habits in the long-term – for decades, not just months. This book will simplify diet.

Carbohydrates are the macronutrient that will play the biggest role in body composition. Proteins and fat intake are necessary for the body to function, yet while the body benefits from carbohydrates, they are not an essential for survival. Keep in mind that carbohydrates *are* necessary to recover and improve performance when performing high intensity training. For the sake of lower intensity training and body fat, carbohydrates are the tweakable variable.

Proteins shouldn't be decreased for any reason ever, including for body fat loss. Improving body composition means losing body fat while retaining or increasing muscle mass, and protein is necessary to prevent muscular degradation. Review Dr. Di Pasquale's quote above to see that he recommends that trainees who are trying to lose body fat should consume at least 1.5 grams of high quality protein per pound of body weight. For a 200 pound man, that would be 300 grams of protein!

Fat can be slightly tweaked when trying to improve body composition, but it is still important to retain, especially for lifters. Fat is a dense source of calories and provides the building blocks of cells and hormones. A lifter who doesn't dabble in high intensity conditioning will use fat as his primary calorie source. As mentioned above, an emphasis on fat consumption will typically result in a decrease in carbohydrate intake resulting in a body composition improvement.

Improving body composition is a very difficult thing – evidenced by the alarming obesity rate in western society. It can be further complicated by an individual's hormonal profile and any damage done to it. There is one constant in body fat loss: it requires consistent effort. Nobody can expect to get lean and jacked with short-term-dabbling in healthy nutrition. This next statement will be obvious, but profound: dropping body fat is hard, it takes time, and will be a daily struggle. There is no quick way to do it, and whether you accomplish your goal is the culmination of little choices you make throughout the day. This book will help provide guidelines for those choices.

If you are an enterprising trainee and want to quantify your body fat, I only recommend a few choices. The best measure will be hydrostatic weighing (where you are submerged in a large tank of water and body density is measured), but it's not an easily accessible option. Neither is a DEXA scan or Bod Pod. The best thing you can do is find a reliable body fat tester with a good caliper to do a 7-site skinfold test (the kind where they pinch and measure). It's important to have a well-trained and experienced pincher because it's very easy to do wrong. Personally, I've done hundreds of skinfold tests and saw many classmates butcher their measurements despite the same training. The caliper is also important; cheap calipers won't garner exact results. A good way to gauge the quality of the person administering the test is to ask how much their caliper cost; good calipers will be several hundred dollars at the cheapest.

Ignore bio-impedance body fat measures – the kind that estimate it based on you holding or standing on something with your bare skin. They are unreliable and invalid because many factors, including hydration or amount of moisture on your skin, can throw the results off. If you don't have access to a hydrostatic weighing tank, a DEXA machine, or an experienced caliper user, then simply take pictures of yourself in your underwear. Do this from the front, back, and sides in a room that is not affected by sunlight; this

keeps the lighting constant for comparisons with later photos. This will be the most objective method to gauge body fat change because you will actually be able to see the difference. I suggest taking the photos every four weeks; anything shorter and results won't be visible and this discourages some people.

Note that losing body fat – like changing any physical attribute – fits along the "diminishing returns" graph. In this case, the rate of progress has a direct correlation with body fat. If body fat is high (>30%), then rate of progress will be high. If body fat is low (<15%), rate of progress will be slower. The more body fat a person has, the more they will lose initially. Yet as they continue, their rate of progress will slow and it may even stall; the methods that dropped body fat from 30 to 20% may not work to drop from 20 to 10%. I point this out to reiterate to readers who aim to drop body fat that the process will not be easy. Plan to work hard even when facing the adversity of slow or stalled progress. I often see people challenging themselves for 30 days to lose body fat. This sets people up for failure because it gives them the impression that 30 days is enough to achieve a lean physique and even promotes temporary dieting instead of generally transitioning into a good diet. Commit to three to six months of effort at a minimum. And remember that this means more than a temporary goal of body composition, but also has an effect on training recovery and longevity.

Lastly, I want to point out that my goal isn't to get people to sub 8% body fat (though I easily sit under 10% using these methods). The goal is not to compete in figure competitions or get completely shredded. I merely want to provide an avenue for lifters to have a lean, muscular physique –burly for men and shapely for women – that represents strength. If you are going to spend all of the hours squatting, pressing, and pulling, then you might as well impressively look the part.

This can be accomplished without obsessive-compulsive attention to detail, walking for hours every week, or doing CrossFit six days a week. We will combine the foundation of the Paleo diet with physiology and lifting knowledge to have an easy and tasty diet. But first we need to understand why the Paleo diet can help us.

Reference

1. Di Pasquale, Mauro. Amino Acids and Proteins for the Athlete, 2nd Ed. Boca Raton: CRC Press, 2008. Print.

Chapter 3 – Why Paleo?

There are thousands of diet books, but few of them provide an outline for optimal health and longevity. Furthermore, the information in diet books often doesn't apply to lifters, trainees, and athletes. It's widely accepted that athletes will forgo healthy nutrition to supplement their sport. Remember the 2008 press on Michael Phelps' diet? He ate 12,000 dirty calories a day and it turned into eight gold medals. In Phelps' case, he performed both high intensity and long endurance training and needed the calories. In fact, leading into the 2012 Olympics there were stories on how he improved the quality of his diet. Does this have any bearing on only winning half as many gold medals and dropping his total medal count to six? I jest; winning four gold medals and two silver medals is still amazing.

Phelps had a rigorous energy demand that required calories for fuel and recovery. I remember in 2008 when CrossFitters stated that if he ate Paleo, he would have performed better. This asinine statement equates food quality with performance. Remember that the last chapter pointed out that high intensity or endurance trainees would need greater levels of carbohydrates; Phelps represents the extreme. It wouldn't be possible for him to eat the same amount of calories through a cleaner, Paleo-like approach. However, you are not Michael Phelps, an Olympian, or even a swimmer. You are an athlete or a lifter who only dabbles in high intensity conditioning or ignores it completely. You do not need the same amount of carbohydrates, but you *do* need adequate calories relative to your training. Contrary to popular belief, it is quite possible to consume them with a Paleo diet approach.

What Is the Paleolithic Diet?

The Paleolithic diet is a nutrition plan focused on what humans evolved to eat. Also referred to as "the caveman diet," "the hunter-gatherer diet," or "the ancestral diet," it posits that the agricultural or Neolithic revolution 10,000 years ago changed the foundation of the human diet from wild plants and animals to cultivated grains. Thus, the Paleo diet focuses on eating a diet that our ancestors evolved to eat – mostly meat and veggies.

From an evolutionary standpoint, the diet makes sense. How much genetic variation occurred in the last 10,000 years, especially within the last several hundred, to consume synthetic chemicals and foods? It took millions of years of evolution to result in the ancestral diet. By emulating this style of eating, people can remove all of the problems associated with grain and therefore reduce diseases of affluence. The Paleo diet is rightfully sold as a health improver, disease reducer, and optimal for longevity. For our purposes, you can think of the Paleo diet as something that allows biochemistry to function efficiently – much more efficiently than the standard "Western" or "American diet."

The Paleo diet puts an emphasis on foods that can be hunted or fished (like meat and seafood) or gathered (like eggs, fruit, nuts, seeds, vegetables, and herbs). It excludes everything else. Our approach will focus on meats, potatoes, vegetables, and quality supplementation while ignoring crappy, processed foods that will only hurt our recovery capabilities.

How closely will we adhere to "eating Paleo?"

The emphasis on Paleo eating has improved many people's lifestyles, health, and training, and this has resulted in a fan base of zealots. There are popular blogs run by people whose only claim to fame is coming to the realization that Paleo eating is the most superior diet in the land, and their mission is to spread its gospel. Furthermore, there is a movement that actively strives for a Paleolithic lifestyle. The hardcore extremists think, "If my ancestors did it, then I need to implement it." In my opinion, this is silly and I will not be asking you to squat to poop or to stop brushing your teeth.

While there are positive traits to – and I shudder to say this – the "Paleo lifestyle," like getting lots of quality sleep and proper physical activity, we will implement sensible practices and disregard the absurd. The actual implementation of the diet (including level of adherence) will depend on the person and what their goals are – what they want and need. Note that unhealthy and fat trainees will need to correct their health and body fat issues before earning the right to "cheat." Later in this book I'll provide guidelines and recommendations on how and when to cheat; it's unrealistic to not occasionally partake in ale or cheesecake. But before I give you the green light to roll with Neolithic tendencies, you first need to understand what's at stake.

At its core, the Paleo diet focuses on food quality. This alone can make the difference in improving health or body composition because it converts low quality calories with high quality calories. Let's explore why improving the quality of food and harnessing macronutrient intake can be beneficial.

Systemic Inflammation

The most relevant aspect of Paleo nutrition is how it reduces systemic inflammation. This is critical for a lifter because lowering inflammation allows for better training recovery. Remember that training stresses have an acute and systemic response. If the diet consists of foods that increase digestive and systemic inflammation, then there are less recovery resources to focus on recovering from training. **This is the major supporting argument for Paleo nutrition for lifters and trainees.**

Paleo nutrition reduces systemic inflammation in several ways: increasing food quality, removing refined carbohydrates, removing gut irritants, and improving Omega 3 fatty acid levels. Before we dive into these topics, let's look at how hormones respond to ingested food.

Insulin Response to Food

Nutritional lessons typically include the law of conservation of energy with the phrase, "A calorie is a calorie is a calorie." This concept states that it doesn't matter what kind of calories are consumed, and what's really important is the amount of calories consumed compared to the amount of burned. While this law does occur, our body utilizes calories differently. Eating 2000 calories a day of protein will have a different effect than 2000 calories of carbohydrates.

Remember Barry Sears' concept of, "Food is a drug?" There is an endocrine (hormonal) response to ingesting food. When food is consumed and going through the early stages of digestion, the smallest components – like glucose and proteins – of macronutrients move into the blood stream. Increasing levels of glucose, a sugar, thereby increases the blood sugar amount. Rising blood sugar is a trigger for the body to secrete insulin from the pancreas. Insulin is an incredibly anabolic, or growth inducing, hormone. Evolutionarily speaking it's a vital hormone for survival because it is released when the blood has important sugars and nutrients available. Insulin's job is to take those useful items from the blood, transfer them through the capillaries, and store them in surrounding tissues. The result is that the blood sugar drops and tissues – like muscle or fat – receive more components to store for later energy use.

Most diets today consist of low quality carbohydrates and fats – carbohydrates being the macronutrients that have the greatest effect on insulin release. Not only are most of diets composed of carbohydrates, but they are low quality simple carbohydrates that enter the blood stream quickly. When blood sugar rises sharply, insulin is released and quickly drops the blood sugar below the "homeostasis level." In other words, the blood sugar is now lower than it was before consuming the carb-rich meal, and the brain sees this as a problem. *The body is starving!* it says. *Hurry and crave sugar! We need sugar to raise the levels back up!* This makes the person crave sugar again, and the process repeats itself multiple times a day, every day.

This is bad. Here's why.

Have you ever drank alcohol? Have you drank it consistently to the point where a drink or two used to get you buzzed, but now you don't feel anything? Well, your tolerance to the alcohol has increased and it takes more alcohol to make you buzzed. Insulin does the same thing. There is an arbitrary amount of insulin released to bring blood sugar back down, but when the blood sugar and subsequent insulin release are consistently abnormally high, your body will adapt to this and insulin will no longer have the same effect. It will require *more* insulin to accomplish the same task. Your tolerance to the effect of insulin is going up. In other words, you are becoming ***resistant to insulin***.

Remember when I said insulin was the most anabolic hormone? Well, it has an arbitrary domino effect on the other hormones and chemical processes in the body. Hormones are peculiar because they serve a primary function, but they also have an effect on a vast array of metabolic processes in the body. These

"secondary" functions will also have an effect on other hormones. Our bodies have evolutionarily adapted so that these hormones can perform in symphony in regulating the body's attempt at homeostasis. Remember that "homeostasis" is the result of adapting to whatever circumstances are presented to the body, and acute adaptations are the result of hormones released in response to stressors. By having an abnormal amount of one hormone, like insulin, it alters the hormonal interrelations and causes problems in the body.

Insulin resistance is the cause of, or is linked with, the following: fatigue, inability to focus, intestinal bloating (which means you don't absorb nutrients), drowsiness, increased triglyceride levels, increased blood pressure, increased inflammation, cardiovascular (heart) disease, depression, skin issues and…increased hunger for inevitably crappy foods. Insulin stores glucose into skeletal muscle (the muscle all over the body that moves bones) for later use. When glycogen – the storage form of glucose – stores are full, the excess is converted into fat. Eating high levels of carbohydrates and becoming resistant to insulin will result in storing high levels of body fat. As if accumulating body fat wasn't bad enough, the worst part about insulin resistance is metabolic disease. At best the body is inefficient, unhealthy, and not recovering well, but at worst a person can develop Type II Diabetes and heart disease.

How do you know if you need to really buckle down to improve your insulin sensitivity? There are a few easy markers that can be reflective of insulin sensitivity.

1. Are you fat?
2. Do you have high blood pressure?
3. Do you have high blood lipid profiles (shown in a blood test)?
4. Do blueberries and dark chocolate taste sour?

If you answered "yes" to any of the above questions, then you have work to do. Address your insulin sensitivity now instead of having to deal with serious health problems when you're older. Oh, and when your insulin sensitivity improves, you will increase your sensitivity to tasting sugar which will make blueberries taste sweet like they are supposed to.

How can you improve insulin sensitivity? Barring you haven't committed irreparable damage, just start following a Paleo diet. Will you crave sugars and processed carbs? Absolutely. But if you're a responsible adult, you'll not eat them. And you'll specifically avoid them for about a month before throwing them in as a "cheat" (to be discussed later in the book). If this means you need to do a "Paleo challenge," then so be it.

Food quality

Improving the quality of the three macronutrients – protein, carbohydrates, and fats – helps the body run more efficiently. Eating meat from animals that were naturally healthy provides higher quality proteins, but also provides other nutrients that won't be found in less healthier animals. For example, grass fed beef is high in Omega 3 Fatty Acids which play a role in reducing systemic inflammation (see more below). Trainees should aim to eat meat from animals that ran, flew, or swam (fish and chicken are included in the term "meat") that lived as close to wild as they could. Grass fed land animals are preferable to the grain fed sort that are pumped full of antibiotics or hormones. Ideally, wild caught fish are preferable over farmed, and chickens or eggs would are better if they were free range and infused with Omega 3s. However, take note that some terms like "organic" don't necessarily improve the quality of the product. There is a specific list for each product or animal to be considered "organic," and it doesn't guarantee the advertised quality. For example, one of the qualifying factors for an organic cow is that it cannot receive antibiotics for one year prior to milking or slaughter, but this doesn't prevent it from receiving the drugs earlier in its life. Your best bet is to buy locally from trusted farmers or vendors or do the best you can with your available grocery stores.

So far we've discussed how to improve food quality in "Paleo choices" of food – the type you would be eating if you were emulating the Paleo diet. The most important part about improving food quality is eliminating horrible processed foods from your daily intake. Stop eating chips, drinking soda, and having "snacks." Snacks are what two-year-olds eat. If you want to be a high performing adult, then eat like an adult who takes their life seriously.

Eliminating processed foods will also remove superfluous chemicals that directly or indirectly cause harm. Chemicals will foul up the body, cause inflammation, and reduce the efficiency of the body's natural processes. Check the ingredients of any packaged food item you intend to buy. If it involves a bunch of words you can't pronounce, then stop eating that food item. A seasoned steak, buttered potato, and rich salad with homemade oil and vinegar dressing won't be full of chemicals, so don't wallow in self-pity about how a Paleo diet leaves few food choices.

Eliminating Refined Carbohydrates

Improving the food quality will subsequently stop the intake of refined carbohydrates. Eating foods that were previously alive (like animals and plants) instead of their derivatives will automatically reduce the carb content of every meal and the overall diet. This is important because it has an effect on insulin.

Read the Insulin Sensitivity section again. And again. Do you realize that it isn't just about being able to recover from training? This is about your life! Is it crazy to hear that what you put into your body will have a direct response in how that body functions? That if you eat lots of refined carbohydrates that there will be repercussions to these actions? As I say on 70sBig.com, I don't just want you guys to

perform better today - I want all of us to be performing well (and making love to our spouses) when we're 80.

So stop eating refined carbohydrate sources. One of the worst is High Fructose Corn Syrup (HFCS). It is literally put into almost every food item (in America) because making food items sweet means that sucker consumers will prefer and pay money for them. I'd rather you pay money on foods that are going to increase your sensitivity to insulin.

HFCS is common in soda. Consuming soda is a wonderful way to wreak havoc on insulin sensitivity because it is a sugary liquid. I have heard stories of people drinking up to six sodas in a single day – that alone is about 180g of sugar. Some folks defend themselves by pointing out how they drink diet soda; zero sugar is supposedly healthy, but diet sodas are full of chemical artificial sweeteners. Despite the fact that there are no carbohydrates present, the sweet taste still produces an insulin response because your limbic system won't know the difference. Avoid artificially or chemically sweetened drinks and foods.

Other refined carbohydrates include any liquid drink that is comprised of carbs, like juices. Drink water, tea, or coffee (we'll talk about alcohol later). Upset about the lack of drink choices? Grow up.

This is a good time to stress avoiding excessive carbohydrate intake, regardless of the quality of the food item. Bananas may be Paleo, but consuming three of them at once is going to throw about 95g of fructose into the system. Paleo or not, carbs shouldn't be abused.

Removing Gut Irritants

We just talked about eliminating refined carbohydrates, but now let's talk about some commonly eaten carbohydrates that also need to be eliminated. Note that I'm making it a point to *eliminate* these items from your diet. The effect of removing these food items is so significant on health and training recovery I want to make sure you understand they should be *eliminated.* Destroyed. Not just "removed" from your diet for you to later fall back into a habitual craving, but eliminated from a regular presence in your diet. If you do a good job of getting healthy, you'll qualify – in my eyes – for occasional "cheat meals," but if you already know you're unhealthy, you don't get any passes.

By cleaning up the quality of food, eliminating refined carbohydrates, and following a Paleo diet, you'll remove "gut irritants" – a term I'm using to imply anything that your body didn't evolve to digest, like wheat, barley, oats, and corn. These irritants are not broken down properly throughout the digestive tract and cause problems. The best case scenario is that the microvilli – small, finger-like protrusions that increase the surface area of the small intestine – will be damaged and subsequently unable to properly absorb nutrients. The worst case scenario is that perforations occur in the intestinal lining, leaking small bits of irritant or food into the blood stream. These items are not supposed to be in the blood stream, so the body labels them as foreign invaders and the body will attack the items. If the item is presented in

the blood stream on a regular basis, the body will have a pathogenic response to the item and will fight it. This is typically how food allergies develop seemingly out of nowhere. The same concept also applies to autoimmune diseases – look to the quality of the diet first.

For our purposes, we will view this "attacking the invader" process as unnecessarily committing some of our system's healing or recovery resources to fight the food-pathogen and heal the perforations in the intestinal lining. Instead of repairing tissue or contributing to systemic recovery, these resources are responding to something that we ate – a process that would not occur if we had not eaten that thing.

Instead of describing each gut irritant and what it does to the digestive tract or the system, we are going to lump them all together as "things that irritate the system and waste recovery resources." Knowing what the irritants are is important so that we do not eat them. The primary sources to be concerned with are grain (especially gluten) and dairy. Basically these two types of food cause a lot of problems in the body – problems that will disappear when you stop eating them. So if you have mucus, splattery poops, heart burn, gastric reflux, irritable bowel syndrome, or generally something weird going on with one of the holes of your body, it is *not* normal. Also note that farting a lot throughout the day, while awesome, is not supposed to happen with a quality diet – especially if they are overly stinky.

Grain and gluten were not part of the evolutionary process that made humans what we currently are. Grain and gluten have only been consumed regularly since the Neolithic revolution in 10,000 BC, but were more of a significant dietary staple when the Agricultural Revolution occurred in the 18th and 19th centuries. The point is that it took hundreds of millions of years for the human species to evolve, and 10,000 years is irrelevant on that time scale – our bodies are not meant to eat grain. And it shows by inducing all of the gross and smelly problems mentioned above. If you need proof, you probably have experienced corn in your poop at some point in your life. Isn't it strange that this grain wasn't able to be digested by your body? Is it crazy to think that it's because the body didn't evolve to do such a thing?

Even if grain did not cause these bad things, and it does, bread and grain would still be something to avoid since they are full of carbohydrates. Consuming lots of carbohydrates, especially at once (like a bagel with 53g of carbs), will only wreak havoc on that insulin sensitivity situation discussed earlier.

As for milk, just drink three tall glasses of it in ten minutes and tell me what your bowels do later in the day. Unless you drink lots of milk regularly, you're going to perfect your "toilet brush cleaning" skills. While it's true that you can help your body to develop lactase – the enzyme that breaks down the milk sugar lactose – milk still causes problems in the digestive system. And even if it didn't, it's a liquid that is designed to make baby mammals grow; its macronutrient composition and likely hormone content induces growth. Unless you're a teenager trying to gain weight, too much milk will cause an unwanted increase in body fat (especially for older trainees) and have a debilitating effect on insulin sensitivity. Since milk disrupts the digestive tract and can make you fat, it's not only going to interfere with your training recovery but make you look pudgy, so stop drinking it. Other forms of dairy won't cause as much trouble, but dairy in general is a gut irritant. Save it for cheat meals.

After removing these gut irritants, it will take four to six weeks for the digestive tract to heal. It's important that during this process that you don't consume the irritant since it will move the healing process back to square one. The digestive tract won't heal in a day or two – the process is more like a continuum instead of an on/off switch. Give your body at least a month free of gut irritants to shift the continuum to "healthy and efficient digestive tract." It might be helpful to commit to a "30 Day Paleo Challenge" for the sake of allowing your system to heal.

Omega 3 and 6 Ratio

Omega 3 fatty acids are polyunsaturated fatty acids that are essential to humans; they cannot be created in the body and need to be supplemented. Put simply, the ratio of 3 to 6 fatty acids is an indicator of inflammation. That is, the more Omega 3 present relative to the Omega 6, the less inflammation.

Unfortunately the standard western diet has a bias towards Omega 6s, like vegetable oils, factory-farmed meat, and standard processed garbage food (nuts and seeds are also high in Omega 6s). Focus on ingesting coconut oil, olive oil, and avocado. Fish is a great source of Omega 3s, so you can add fish as a garnish to your beef and pork meals (remember, fish is more like a vegetable). Fish oil is a great way to consume necessary EPA/DHA, which are full of Omega 3s. I like Robb Wolf's recommendation of .25g of EPA/DHA per 10lbs of body weight. But note that Omega 3 intake is a relative thing. If you are getting lots of them through the diet – grass fed meat, Omega 3 enriched eggs, grass fed butter – and have cut down and eliminated Omega 6s, your ratio is probably good. If your ratio is poor, and you are unhealthy, fat, and highly inflamed, then Wolf recommends 1g of EPA/DHA per 10 lbs of body weight.

I recommend that lifters consume fish oil even if they have a solid Paleo diet. The more we can improve our systemic inflammation, the more it will help with training recovery. I prefer to get liquid fish oil, since it's easier to consume out of a shot glass instead of taking 15 gel caps. I have found that lemon flavored fish oil liquid does not produce fish burps. Please note that this is not a comprehensive look at Omega 3 fatty acids – look to the recommended reading sources to enhance your knowledge on this subject.

Summary

Most lifters that haven't read anything about the Paleolithic Diet will observe the irritating nuances of the "Paleo zealots" online. It can be annoying to hear them sit atop their high horses and say, "You wouldn't have that problem if you ate Paleo!" Especially if they are scrawny and don't lift. This chapter focuses on the most important benefits of the Paleo diet for a lifter. Even if you don't care about your quality of life into old age or what your body fat percentage is, you should care about increasing performance, getting stronger, and getting better. If you are going to spend the five to fifteen hours a

week training, then do so efficiently and reap the rewards of your effort. Do everything you can outside of the gym properly so that your work inside the gym will flourish.

The Paleo diet helps reduce systemic inflammation. If the system has to spend recovery resources trying to heal damage caused by the diet, then it is, by default, not pouring 100% of those resources into training recovery. Systemic inflammation is reduced by improving insulin sensitivity, increasing food quality, removing refined carbohydrates, removing gut irritants, and improving Omega 3 fatty acid levels. Converting to a Paleo diet will not only accomplish the above, but it will provide rich nutrients and improve digestive functioning. It can improve various pathological conditions that the conventional medical community doesn't relate to diet. It can improve how you feel, and how effective you can be throughout your day.

I realize that changing dietary habits is as difficult as passing a bowling ball through your anus, but this is important. It's not just important for recovering from volume squatting or looking jacked this next summer, but it plays a role in your health – not to mention potential medical costs later in life as a result of your lack of attention to diet. This method of eating is easy, effective in multiple ways, and the basic approach is something you can sustain throughout the rest of your life. There are a few ways to tweak the basic "meat and veggies" set up, and Chapter 4 will explain how to implement the Paleo Diet for lifters.

Chapter 4 – Implementation

The lack of food choices seems to scare a lot of trainees away from the Paleo diet, but it's very simple. Eat meat and potatoes. Add veggies. Plan all of the meals around the protein, and add lots of fat. The end; thanks for reading.

That's pretty much it. The key is avoiding all of the crappy foods that cause the problems we discussed in Chapter 3. And it's not enough to avoid them some of the time, but *most* of the time. I've easily coached and consulted with over a thousand people, and I usually hear the following: "My diet is pretty good." Then I'll ask a few simple questions and it's revealed that they never hit their minimum amount of protein, they succumb to snacks and desserts throughout the week (e.g., "My kids are eating it, so I usually have some too…"), or some other lame excuse.

Eat items that were previously living excluding grains, and you're pretty much set. Focus on meat, potatoes, veggies, and quality fats like coconut oil, olive oil, butter, and avocado. There's no measuring or counting calories, though these things can be necessary depending on the goal.

Questionable Food Choices

Here are a few food items that are acceptable for Paleo consumption, but have a bit of controversy concerning their consumption.

Potatoes

The die-hard Paleo folk will read the previous section and say, "Hey! You're not supposed to eat potatoes! Rabble-rabble-rabble!" **Potatoes are the carbohydrate staple for a lifter eating Paleo**. They obviously provide necessary carbohydrates, but they go well with most meals - breakfast, lunch, and dinner. Starchy potatoes provide a flavor combination on our palate that facilitates eating a lot of meat. If you aren't very hungry, eating a 20 oz steak by itself may be a challenge, but having a buttery baked potato will maintain a satisfying taste throughout the meal.

Another key fact is that potatoes can always be drowned in butter to provide necessary fat calories. Fat helps slow the absorption of carbohydrates and can reduce the subsequent insulin hit. Not to mention it makes the potatoes taste extra awesome, so everybody wins.

The main consideration is the type of potato to eat, and this will change depending on the goal (discussed later in the chapter). Potatoes can be lumped into two categories: white and not-white. And that basically means white versus sweet potatoes. These two types of potatoes are similar in almost every way; they have about the same carbohydrate content, vitamins, and minerals. The primary

nutritional difference is that sweet potatoes have a lot of Vitamin A (the same prevalent vitamin in carrots). Yet another difference between white and sweet potatoes is the effect they have on blood sugar; white potatoes have a greater effect on increasing blood sugar than sweet potatoes. This will matter for trainees trying to lose body fat.

Fruit

When normal folks switch to a "whole food" or Paleo diet, they often fill the space that grain-based carbs used to fill with fruit. After all, fruit is naturally available in the wild, so it's perfectly fine to eat. Unfortunately, fruit is sugary sweet and full of fructose. In other words, fruit is a concentrated source of carbohydrates that will usually have a significant effect on blood sugar and subsequently insulin.

As a lifter or athlete, you may eat more fruit than the non-training Paleo counterpart, but I urge you to obtain the majority of your daily carbohydrates from potatoes. High levels of fructose have been shown to contribute to hyperinsulinemia AKA insulin resistance. If you are fat, unhealthy, or have high blood pressure despite focusing on Paleo eating, yet consume lots of fruit, then fruit intake needs to decrease.

Nuts and Seeds

A standard Paleo diet will only use nuts and seeds sparingly because they have a high amount of Omega 6 Fatty Acids – the kind that promotes inflammation (remember, increasing the number of Omega 3s to Omega 6s is how to reduce inflammation). I like Robb Wolf's recommendation of treating nuts and seeds like a condiment; sprinkle it on your food (e.g., a salad) like you would a dressing or sauce.

If you are in a bind to consume calories, then I deem it acceptable to pound the nuts and seeds. If you don't have access to taking a tablespoon of coconut or olive oil, eating a handful or two of nuts or seeds can provide some fat calories (along with a smaller amount of carbs and even smaller amount of protein). It would be preferable to get the fat from animal meat, the aforementioned oils, or avocados, but nuts and seeds can fill the caloric void and are easy to consume quickly. And since the rest of your diet will be clean, your overall Omega 3 to Omega 6 ratio should be pretty good, so intermittently using nuts or seeds as a primary fat source is not a big deal. Just keep in mind that idea is contingent on being a good boy or girl the rest of the time.

Other Acceptable Foods

There are some foods that are traditionally not accepted in a strict Paleo diet, but can serve a purpose for a lifter and not cause much harm. As with the fruit, nuts, and seeds in the previous section, these

food items should only be consumed if the trainee is healthy, fairly lean, and in demand of additional calories or specific macronutrients. That means if you are trying to improve body fat and health, you will avoid these items.

Dark Chocolate

There are a lot of misconceptions about chocolate, but it can be a useful tool to garner additional fat calories to aid recovery. The emphasis is on pure, quality dark chocolate. This doesn't mean Hershey's version of dark chocolate or dark chocolate M&M's; look for dark chocolate that contains a minimal amount of ingredients. Also look for at least 85% cocoa, and preferably 90%; this amount of cocoa ensures the chocolate carries more fat than carbohydrates, and we're eating it for the fat anyway.

I am partial to a Swedish brand called Lindt & Sprüngli; it is found in most grocery stores (including Walmart) and is relatively cheap. The ingredients are: chocolate, cocoa powder, cocoa butter, demerara sugar, and bourbon vanilla beans. The fat, carbohydrate, and protein amounts per serving are 18, 15, and 5g respectively for the 85% cocoa version. They are 22, 12, and 4g respectively for the 90% cocoa version. Note the decent fat content, especially in comparison to the carbohydrate content. It's an acceptable trade off, assuming the individual is already lean and healthy.

Nut Butters

Dark chocolate goes well with nut butters. Stick with almond or peanut butter; cashew butter is generally higher in carbohydrate content. Note that these butters suffer from the same problems as nuts and seeds; they are high in Omega 6 fatty acids and will therefore contribute to systemic inflammation (depending on what the ratio of your Omega 3s to Omega 6s is in your diet and how healthy or inflamed you are). Generally you will consume butters sparingly (maybe a couple of spoonfuls with your dark chocolate), but they can be used in a pinch to acquire a lot of calories. Keep this in mind when you know you haven't consumed enough calories in a day.

White Rice

The reason we avoid wheat is because of the gluten content. Gluten is one of those "digestive disruptors" that will destroy intestinal lining, create mucus (which facilitates irritable bowel syndrome), and potentially causing perforations in the digestive lining and wreaking havoc as explained in the previous chapter. However, rice does not contain this thrashing gluten protein. Rice is a seed; it will inherently have characteristics of a seed and not want to be digested so it can pass through poo and still make a plant. But it is not exactly like wheat, barley, oats, and corn since it lacks the harmful gluten. For

lean, healthy individuals who are purposely trying to consume a dense carbohydrate that will have a sharp effect on blood sugar and insulin (like after training), then rice will be okay. If you are trying to lose weight, avoid it for the same reason.

Hot Sauces and Condiments

When buying any packaged food item, always read the ingredients. Hot sauces will have an ingredient that is simply called "spices" which can potentially consist of some bad stuff (i.e., "not Paleo"). However, most of the time we don't consume huge portions of hot sauce and the carb content is low or nonexistent, so I deem it acceptable for non-fat people to eat hot sauce.

Condiments are a little different. They can often be made with a bunch of crap, especially high fructose corn syrup (HFCS). In the last chapter you learned how fructose can facilitate hyperinsulinemia and HFCS is a refined carb that does the same. The only time I deem it acceptable to ingest HFCS is if someone is purposely cheating. Otherwise eliminate it from the diet. Luckily ketchup companies have caught on and are now making ketchup without HFCS (a version made by Hunt's is readily available). Most mustards do not have HFCS or sugar; just read the label. Most salad dressing includes low quality ingredients so read the label. Dressings can be an additional source of fat in your meal, but if you're adhering to a quality diet then avoid the creamy dressings. Stick to oil and vinegar dressings (order "Italian" at restaurants). Sometimes you can find creamy dressings without low-quality ingredients (some use Greek yogurt as a base), but if you're trying to lose fat then avoid them entirely.

Supplements

By now you understand my general nutritional philosophy: eat the right high-quality foods in order to help the body operate efficiently and reduce systemic inflammation so that the system can focus on training recovery. At the same time, my philosophy focuses on the big picture before whittling down to the minutia. In the case of nutrition, I want trainees to harness their macronutrients (i.e., increase protein and fat, decrease carbohydrates to levels that meet the goal) before worrying about micronutrients. In other words, fix the quality and amount of food eaten before worrying about supplements.

Conventional fitness or bodybuilding crowds will glance at this section and think it misses out on various pre and post workout supplements, but the following list fits the above goal. There is no point in trying to increase performance in a given workout if the system's foundation isn't operating efficiently. This section will not have a comprehensive review of the effect each item has on biochemistry – review the reading list for elaborated information.

Fish Oil

If you're following all of the guidelines, you will be focusing on meat, potatoes, and veggies. You'll consume food rich in Omega 3s when you can (eggs, grass fed meat or butter, fish, etc.), but I am a realist and know that everyone won't have the resources or logistics to always eat grass fed products. This is why supplementing fish oil will be important; it provides EPA/DHA and Omega 3 fatty acids to improve on the "Omega 3 to Omega 6" ratio to reduce systemic inflammation. In Chapter 3 I told you I like Robb Wolf's recommendation of .25g of EPA/DHA per 10lbs of body weight for healthy individual. Review the "Omega 3 and 6 Ratio" section in Chapter 3 for more information.

I don't think it matters when you take fish oil, but in my opinion consistently taking it at the same time will be beneficial. Personally, I do not take it in the morning because my breakfast is often high in fat (lots of eggs and butter on whatever type of potato I'm eating).

Vitamin D

This vitamin is known as a "pro-hormone." This means it facilitates the function of hormones, and that means it helps your body run efficiently. It's critical in fat metabolism, autoimmunity (i.e., systemic recovery), insulin resistance, and is an anti-inflammatory. You can get it from the sun, but it wouldn't hurt to get a little extra. And it's obviously more critical for indoor workers or people who live in harsh winter conditions with low levels of sunlight. Robb Wolf says conservative ancestral estimates are that they received 10,000 to 20,000 IUs of Vitamin D and he thinks it is reasonable to consume 2,000 to 5,000 Ius via supplementation. Vitamin D is best consumed in gel caps, and they are extremely inexpensive. Personally, I took a 5,000 IU gel cap during the summer of 2012 (while frequenting the sunny outdoors) and during the winter of 2012/2013 I have been taking 10,000 IUs. My genitals are still attached.

I prefer to take most of my vitamins and minerals in the morning, and I do so with Vitamin D. My rationale is that some items will facilitate high levels of energy and efficient body functioning. Not to mention it's easy to take them all at once in the morning.

Magnesium and ZMA

Almost all diets – including Paleo versions – are deficient in magnesium and zinc. These minerals are critical in many enzymatic processes in the body including energy production, muscle contraction, nerve transmission, and insulin resistance. There are links between magnesium and fibromyalgia and other chronic fatigue syndromes. Both magnesium and zinc are linked with being able to fall and stay asleep; they facilitate efficient sleep cycles. Generally speaking both of these minerals contribute to testosterone levels; better testosterone levels will only aid training recovery.

ZMA is a specific compound of zinc and magnesium that specifically helps with sleep (it is taken before bed). Trainees who add magnesium and/or ZMA to their routine report having more vivid dreams, a byproduct of their bodies hitting the important stages of REM sleep more often and more intensely. Better sleep facilitates better recovery.

If magnesium is supplemented by itself, it could be taken at night. I'm partial to Natura Calm, a product I learned about from Robb Wolf. The magnesium ionizes in water to create magnesium citrate, which is more effective than more standard versions, like magnesium oxide. However, if ZMA is also going to be used before bed, move the magnesium-specific supplement to the morning; too much magnesium at once *will* give you splattery poo. The recommended ZMA intake is 30 to 60 minutes before bed on an empty stomach. If you take it with food, there's a chance that you'll wake up with an uncomfortable bowel movement, especially if calcium is present in the food sitting in your stomach (it inhibits zinc absorption).

Multivitamins

There is a lot of debate about the efficacy of multivitamins. My opinion is that they aren't going to hurt anything, especially since most of the vitamins and minerals are in such low dosages that there isn't any way you will consume too much of them, despite specifically supplementing Vitamin D, zinc, or magnesium. I'm partial to multivitamins that are high in Vitamin C and the B-vitamins – they are linked with boosting immunity (i.e., systemic recovery) and energy levels. Personally, I take a packet of regular EmergenC every day (along with the other stuff in this list: Natura Calm/magnesium and Vitamin D) which is loaded with B and C vitamins. Don't be concerned with consuming too much of either; they are water soluble and you will urinate the excess out (if you've ever had neon urine after taking vitamins, this is what is happening). Multivitamins aren't going to be harmful and may provide small amounts of micronutrients that your diet is neglecting.

Whey Protein

You may be curious why protein supplementation is so far down on this list. I prefer trainees to get most, and preferably all, of their protein through animal sources. The quality of protein will be higher, there are more nutrients, and meat is usually accompanied by necessary fat calories to help recovery. I do not want trainees to rely on whey protein supplementation to achieve their daily protein minimums. Also, any time calories are consumed in liquid form, there is an insulin response (even when it is protein without carbohydrates). Trainees who aim to improve insulin sensitivity should avoid relying on whey protein supplements.

Even if whey is used, I prefer consumption of it to stay under 50g of protein per day. This ensures the majority of protein consists of meat. It should primarily be taken before or after training sessions so that the resultant insulin spike can facilitate the session. I don't like the idea of having whey protein shakes in the morning or at night because of the debilitating effect on insulin sensitivity.

Creatine

Ten years ago creatine was put on a pedestal for its effect on recovery, but studies have shown it can be an important supplement for healing oxidative stress, providing creatine phosphate for short duration activities (like lifting), and aiding in training recovery. Some folks are said to be "non-responders" to creatine; it doesn't have much of an effect on them. Often the effect of supplements are arbitrary and immeasurable; this is why we stick to items that help the system run efficiently. We know that creatine is an important substrate for the ATP-PCr system, so even if you don't "feel" an effect, it is probably contributing.

Single ingredient creatine monohydrate can be found online or in stores for very cheap. It doesn't have much taste and can be combined with whey protein. Most trainees will be fine with 5g doses, but follow the directions on your product label.

Types of Trainees

At this point you understand how and why a Paleo approach is beneficial, yet there are people out there who "just don't get it." Right now there are Paleo aficionados conducting seminars – in gyms no less! – about how to eat Paleo, who are doughy and fat. They spend a lot of time discussing ways to bake Paleo desserts and other useless information. Just because a food is deemed acceptable by "Paleo standards" doesn't mean you have free reign on consuming it. A dessert is desirable because it sweet and full of carbohydrates; qualities that are only debilitating to insulin function. Improving insulin sensitivity is not a byproduct of Paleo eating; it's a result of proper implementation based on your wants and needs, or goals.

Gather a crowd of ten lifting Paleo eaters and they will be in ten different stages of health, performance, and aesthetics. Not only do they want to increase performance but they also need to improve or maintain their health. We learned in Chapter 3 that carbohydrate abuse causes problems and Chapter 2 showed us that most trainees don't need much of them at all.

The amount of carbohydrates will depend on activity level. The amount of protein will depend on lean body mass goals. The amount of fat will depend on how many calories are needed to recover. Let's look at the common body types and how they should implement a Paleo diet.

Fat Trainees

This type of trainee carries a lot of body fat. Their goals probably include losing fat, improving health, maintaining or increasing strength and lean body mass, and improving dietary habits. If they are new to barbell training with full body, compound movements, and they are focusing on a Paleo diet, their results will be significant since lifting will provide a significant systemic stress. However, if the trainee lifts regularly and carries a lot of fat, their progress will be dependent on how crappy the diet previously was and what Paleo changes they are willing to adhere to.

Chapter 2 told us that protein requirements for losing body fat are at least 1.5g per pound of body weight, especially if the carbohydrate intake dips below 100g/day. This is because when the body is in starvation mode – where it needs to create glucose from resources in the body as a result of not consuming it throughout the day –a greater amount of protein is being broken down and used in the liver to make glucose. Since a portion of the protein is used by the liver, a greater overall amount is needed to fuel the training recovery of the skeletal muscles.

At the same time, the choice of protein can be modified to reduce overall caloric content. Avoid fatty cuts of beef and pork. Lean cuts of beef can be thrown into the rotation, but the majority of meat intake should be wings and fins: white chicken, turkey, and fish. Fat consumption shouldn't cease and these lower fat meats can still be cooked in olive or coconut oil. Since the fatty meats (like pork and beef) will be cooked in the same oils, using lean meats will cut down on the overall fat consumption to lower the daily caloric intake.

As you would expect, carbohydrate intake should be strictly controlled. We know that the minimum will probably sit around 100g/day, and many folks won't need much more than that. Veggies should be the primary carbohydrate and food filler; they can easily be eaten for lunch, snacks, and dinner. Since eating a variety of vegetables is so rare in unhealthy diets, this will be a time for trainees to experiment with vegetables they have never cooked or eaten. Eat a variety of different colored vegetables to keep it interesting. If potatoes are consumed, they should only be sweet potatoes; white potatoes will have more carbohydrates and an undesirable effect on insulin sensitivity.

Quality fats like olive oil can be used to cook meat and avocados can be eaten with meals. Fish oil consumption is a given for unhealthy trainees. Butter is also acceptable, but grass fed butter is preferred. Try to stick to these sources of fat and limit the lower quality inflammation-causing choices like peanut butter, nuts and seeds (and avoiding processed foods with Trans fats should be obvious). Fat trainees also aren't free to consume dark chocolate since it contains extra carbohydrates that they are trying to avoid.

Carbohydrate intake should primarily occur around the training session. Do not use gimmicky carb supplements like waxy maize – if you carry excessive body fat; you definitely need to improve your insulin sensitivity and that won't be accomplished with liquid refined carbs, either. I don't see a need to consume more than 30 grams of carbs before and/or after a training session. Anything more at one time would hamper the attempt at improving insulin sensitivity.

I like to recommend that general trainees do not allow their grams of carbs to exceed the grams of protein in a given meal. A person aiming to lose body fat should probably keep the grams of carbohydrates at half of their protein intake for a given meal. For example, if a 250 lb male trainee is following Dr. Di Pasquale's "protein for body-fat loss" advice, he is supposed to consume 375g of protein in a day. That is about 75 to 62 grams of protein five or six times a day respectively. If the trainee keeps his carbohydrate intake to about 30g per meal for five meals (or a little under half the protein for each meal), that will be 150g of carbohydrates a day. That isn't too far above the 100g/day minimum for carbs and follows the "only eat half the carbs relative to the protein" guideline. The 375g of protein would be 1500 calories, the 150g of carbs would be 600 calories, and a .5g/pound fat recommendation to make 125g of fat would be 1125 calories – these numbers would make 3225 calories. Is that too few? Not only do I not know, I don't care. If he wasn't recovering, he could increase his fat consumption. Eating 250g of fat (2250 calories) would increase the daily caloric amount to 4350.

I hate counting calories. It's neither part of my personality to stress over meticulous data nor is it part of my nutrition philosophy. It can lead to eating disorders and lack of enjoyment in the consumption of food. I merely use the above calculations to show how my "guidelines" create the outline for macronutrient intake. That means we define the protein intake based on the lean body mass, the carbohydrate intake based on the goal and the activity level, and then we start with a level of dietary fat and tweak it up or down as needed. In the case of reducing body fat, we'll start with a lower amount of dietary fat and increase the amount if recovery becomes an issue.

Often times if a high body fat person hits their daily protein goal and eats Paleo foods, they'll lose body fat quickly without even considering the carb or fat amount. This is due to eliminating the problem-causing foods and improving insulin sensitivity. Yet, if a not-so-fat person wants to drop their body fat further, this section shows them where to start. Regardless, body fat and physique improvements can be gauged with progress photos.

As established above, every meal will be high in protein and dietary fat, and carbohydrates will be an afterthought until the training session. Breakfast can be eggs and bacon, maybe with half a sweet potato with butter. Lunch can be a quality lean meat and veggies drizzled with seasoned olive oil, and avocado. Snacks can be similar, albeit with different meats or veggies to avoid monotony. Dinner can be a nicely seasoned lean beef with a spinach and tomato salad and guacamole – a sweet potato will be a nice addition if this is a post workout meal. A medium to large sweet potato will have about 25 to 40g of carbohydrates, so plan accordingly. If meals are consumed later at night, then remove carbohydrates from them. It'll reduce the insulin response, hopefully aid in the sleep process, and keep the trainee from adding onto the day's carb intake.

Trainees who struggle with losing body fat don't struggle because healthy nutrition fails them; they struggle because they are not willing to make the choices to succeed. Before deciding to use a Paleo diet to reduce body fat, you must first mentally commit to the task. There is a difference between wanting to do something and committing to do something. Merely wanting to do it will mean that you start a

nutrition plan and then allow yourself to fail by giving in to cravings or fooling yourself into thinking that you deserve a cheat meal. These are rationalizations that the mind creates when it experiences strife. If you commit to the means instead of the end, then you shouldn't be surprised when things get difficult. Use that time to prove your quality and to overcome the adversity of discomfort to work towards your goal. You are fully capable of conquering this feat, just be sure that you honestly believe it before starting. If you find yourself faltering, please voice your concerns on 70sbig.com or the 70's Big Facebook Fan Page – our community can support you. Take responsibility to consistently adhere to quality diet principles; I promise that in the end it will be worth it.

Skinny Trainees

This type of trainee has a slight body that either is "skinny fat" or "skinny without fat." Their goals probably include wanting to gain muscular body weight, wanting to get stronger, not wanting to gain excessive body fat, and not wanting to subject themselves to poor health. Besides, most skinny folks are not skinny because of healthy nutrition and exercises choices and they probably need to improve their "internal health," too (e.g., insulin sensitivity, blood pressure, systemic inflammation).

Conventional wisdom would hold that along with a linear strength progression, skinny trainees should eat everything under the sun, especially milk. Pound the calories and growth will ensue. And this is true. There is no such thing as a "hard gainer," only people that do not eat enough of the right stuff. Skinny people are skinny because they have made a series of decisions that resulted in being skinny. When a skinny person claims to "eat a lot," this is obviously a deflection of responsibility because if they truly ate a lot, they wouldn't be skinny. It's a pretty simple process that is easily fact checked with eye balls.

However, the "eat everything" mentality is typically given to new trainees, yet they aren't provided any guidance on what they are supposed to do once they gain weight. It is said – and I have said this in the past too – that losing body fat is harder to do than gaining muscle. While this is physiologically true, in practice it isn't actually the case because eating habits are damn near impossible to change. Let a guy eat junk food for six months and he'll be very confused when you tell him to stop, even if he knows the reason why.

The claim is that clean eating cannot yield the same results as dirty eating. This is true if the guidance on how to eat clean is poor. Skinny trainees will need an emphasis on calories, so let's talk about how to pound calories, Paleo style.

I always start in terms of how much meat they should be eating. A pound of meat has about 110g of protein, not to mention quality nutrients and fats, so this will be the emphasis. Two pounds of meat will be about 220g of protein, and this is a wonderful starting point for a guy that weighs less than 185 pounds. Eat two pounds of meat, and make most of it (over 75%) beef and pork. This doesn't count the eggs (which should be at least 4 eggs a day) or any other protein that will come from peanut butter or

nuts and seeds. Skinny guys should add in 50g of whey *on top of* the two pounds of meat they are already eating; whey protein shouldn't be substituted for a lack of meat.

Next I deal in terms of carbohydrates. If a guy is trying to gain weight, I tell him to eat three large potatoes a day (white or sweet – any type of potato). That alone should put him at 100 to 130g of carbohydrates, not counting what other carbs he consumes in fruit or nut products. Throw in a couple apples and that number can increase by at least 50g of carbs (about 25g of carbs in a medium apple). You'll notice I prefer giving people "eating requirements" instead of telling them to eat a certain amount of macros. I find that this is easier to do and easier to think about.

Lastly, skinny trainees need to pound the living hell out of fat when they get the chance. Cook meats in olive or coconut oil, slather those potatoes with at least two tablespoons of butter, have handfuls of nuts and seeds after each snack and meal, and, if necessary, swallow a tablespoon of olive or coconut oil with each meal. As you can see, the diet is coming together. The emphasis on potatoes not only provides a "clean" source of carbs, but it provides an avenue to get a significant amount of fat. Not to mention the potatoes make it easier to eat half or three quarters of a pound of meat. Calorie sources like milk are just a crutch to make skinny people get more calories because they can't be trusted to eat enough calories without it. However, if the trainee follows the plan above, their body will be fueled with proper calories in proper macronutrient ratios to aid lifting recovery.

Notice that I didn't mention vegetables. Realistically, the skinny trainee doesn't have time for vegetables. They certainly provide important nutrients, but they take up space in the stomach; space that should be stuffed with more meat or buttery potatoes. It would be nice if a skinny trainee can throw down a fistful of spinach lettuce once a day – and it'll probably help them poop – but I'd be curious to know if the trainee was uncomfortably full while chewing the spinach. If he's not, then he probably isn't eating the minimum amounts of meat and potato.

Breakfast should be at least four eggs – but more like five or six – with a potato (or hash browns) cooked or covered in butter. Note that if you buy packaged hash browns, the ingredients may contain wheat or other stupid ingredients, so look for products that are only potatoes, or just cut them up yourself. Lunch can be some seasoned sirloin steaks with a potato (covered in butter, of course), a snack could be some garlic pork chops with a sweet potato, and dinner could be fajita seasoned beef, a sweet potato, and guacamole. Add in fat with the nuts and seeds and/or tablespoons of oil after each meal. Add in the whey protein around the training session and that's a pretty solid day of eating right there, provided it meets the minimum meat requirement.

Skinny trainees don't have any limitations on when they can eat or when to have carbohydrates – they need to hit their meat and potato numbers while pounding the fat. It's easy to quantify whether or not these numbers are hit or missed each day. Skinny trainees can also eat "questionable foods" like fruit, dark chocolate, rice – they fit with the Paleo style of nutrition and increase the variety of food choices.

Gaining lean body weight is hard. It requires constant attention to detail and is usually uncomfortable. At the same time, it is doable. Follow the directions in this section and you'll gain weight. And if you find yourself gaining a little bit of body fat – and you have been following the above directions – then chalk it up as a byproduct of getting stronger. We want to avoid *excessive* fat gain, but a skinny guy's opinion on fat is invalid because he's been skinny his entire life. If he has barely ever carried any fat, then a little bit may be alarming. Gaining muscular body weight is not a sprint, but a long process that may take years. For skinny folks that have never trained, they will probably have a high rate of progress initially that will eventually slow. Body weight fluctuations can be due to many things like hydration, how full the stomach is, how many carbs have been eaten recently, and whether or not you've dropped a deuce that day. Look at long-term body weight changes and keep progress photos to gauge physique improvement.

Lean Trainees

These types of trainees are already fairly lean with an athletic build, yet they may or may not need to get stronger or bigger. They either need to gain strength and lean body mass or they want to maintain their size and increase performance.

The "lean, but need to gain" category is usually a guy that is around 185 pounds on a frame taller than 5'10" (or a woman who is, say, 110 pounds or less). More muscle will fill out his frame and make him a better lifter or power athlete. He will eat similarly to the skinny trainee in the last section, yet will control his macros better. Depending on the activity levels, two potatoes will probably suffice and the emphasis on fat consumption may not necessary. However, if the trainee is feeling flat in training sessions or throughout the day, then they can increase carbohydrates and fat respectively. The minimum amount of protein a trainee will need, according to Dr. Di Pasquale in Chapter 2, is 1.2g per pound of body weight. This would mean a 185 guy would want about 220g of protein, and therefore could have a minimum meat intake of 1.5 pounds of meat.

The "lean, but maintain" category is usually a guy that is over 200 pounds (or a woman around 130 to 140 lbs at average height) who doesn't intend on gaining more body weight but just wants to improve strength and performance. This should be the end goal for any weight class competitor (like powerlifters and weightlifters). He will have similar protein minimums, though they will be a bit higher. A 200 pound male will need 240g of protein, so the "two pounds of meat" requirement is back in effect. He can probably use a "two potato base" for his carbohydrates, and can increase the fat when necessary for recovery. Trainees who train very hard for a strength sport should go ahead and pound the fat content like the skinny trainee did earlier in the chapter; add tablespoons of olive and coconut oil after each meal with a handful of almonds to acquire additional fat. Dark chocolate and peanut butter can also provide additional fat calories to aid in recovery without contributing to body fat gain.

Lean trainees have a natural benefit in that when there is a low amount of body fat, it's easier to tweak the body fat up and down. Want to increase size? Add more carbs and be sure to hydrate. Want to cut

down a bit? Drop the carb content a bit and adjust water intake. Just keep in mind that body fat levels under 8% are usually debilitating to performance.

Some lean trainees, like me, are more in danger of losing weight than gaining it due to training and activity levels. In this sense, a lack of consistency can mean weight loss. It was important for fat trainees to be consistent to lose body fat. It was important for skinny trainees to consistently eat a lot to gain mass. Now lean trainees must be consistent to at least maintain what they have. If they want to add lean mass – and their program's set and rep scheme facilitates this goal – they merely need to increase protein and fat intake.

Breakfast should be six or seven eggs and a potato cooked or covered in butter. Subsequent lunch or snack meals should consist of a base of meat – usually beef and pork – with a potato or other Paleo acceptable carbs (like fruit) depending on when the training session is. Dinner should be more robust helpings of meat with potatoes and vegetables accompanied with good fat choices (seasoned olive oil with vinegar as dressing, avocado or guacamole, etc.). The main difference in a lean trainee's diet is now they should make time and room for vegetable consumption. Performance may be important, but let's not neglect digestive function or the nutrient benefit of vegetables. Lean trainees should also make it a point to throw in a variety of meats into their diet. Fat trainees needed to reduce calories, so they focused on lower fat meats. Skinny trainees needed to pound calories, so they put an emphasis on fatty meats. Lean trainees should occasionally eat chicken or fowl, different types of fish, and lamb to vary their diet. The main goal is to not eat the same thing every day to provide a variety of nutrients but also eliminate the possibility of developing a resistance or mental aversion to a type of food. Use different cuts of different animals; it'll ensure that eating is always a new and enjoyable experience.

All trainees should aspire to be lean, muscular trainees. Ideally skinny or fat folks will work to be muscular and lean, and then they will aim to maintain such a physique into old age.

Older Trainees

These trainees will have varying body types, but their goals will probably revolve around health, longevity, as well as increasing their performance in strength and conditioning. Though performance may be important, they realize that they aren't in their 20s and want to improve the function and look of their bodies to support an active lifestyle.

Older trainees should just follow the classic Paleo model: eat meat with vegetables and healthy fats. They can throw more dense carb sources like sweet potatoes, rice, and fruit in to fuel their training or energy levels, but the foundation of the diet should be meats, veggies, and fats. Eating a mostly clean diet with quality supplements will help reduce the effects of the aging process since hormonal function will be more efficient compared to a Western diet. I'd go so far as to say that as the older we get, the more critical it is to focus on Paleo since it can have such a positive effect on avoiding pathology and

sickness. What could be better than a high nutrient diet that helps reduce inflammation in the body? It will improve quality of life, make us more resistance to sickness, and if we are stricken with disease, we will probably have a system that is more adept at handling it because we have prepared it well with quality training and nutrition.

Summary of the Paleo for Lifters Model

The last section showed three distinct types of trainees. The truth is that not everyone will fit nicely into one category or another. This book is not designed to comprehensively cover all possible scenarios and spoonfeed you a food plan based on your particular ailments and goals. Though I could probably make a lot more money by doing that, I want you to learn why you should eat like this and how to do it *on your own*. Too often trainees come to me and say, "Just give me a program!" Sorry, this is your life, not mine. I can't be there every minute of every day holding your hand and guiding you in your decisions. You have to learn and understand a baseline of knowledge so that you can be the one to make those decisions, because nobody else in the world is just like you.

We are using the formal Paleo diet to make good decisions on food quality, but then we are controlling our macronutrient ratio based on the goal. Protein intake is dependent on body mass – most people will eat at least one gram of protein per pound of body weight. Gaining lean mass and losing body fat will necessitate greater protein numbers. We know that everyone will have a minimum carbohydrate intake of about 100g, but the practical maximum is dependent on activity level. Finally, fat intake will be higher than a Western diet, and it will provide the calories to promote recovery from training. Generally speaking, if you feel underfed, then increase the protein and fat. Don't worry about hitting a specific protein/carbohydrate/fat ratio; just know that you'll focus on protein and fat and add carbs based on how crazy the training is.

Isn't that easy? Once you establish the routine and understand "this is how much protein I need in a day" and "I only need this many carbs," everything else falls into place. The sections above serve as guidelines based on your specific body type or goal.

A Step-by-Step Proposal to Improve Food Quality

I realize that this can be overwhelming. It's easy for me, a guy who primarily eats Paleo foods, to tell you, "Hey, just stop eating all of that bad stuff and just eat this nice, healthy stuff." But habits are a bitch. In my experience working with people, it's easier to knock down one wall at a time instead of trying to punch a building down. Here is a step-by-step way to improve food quality. These phases aren't set in stone, but they are organized with what I would recommend to a random unhealthy person. Each phase could be implemented in as little as a week or as long as a month.

Phase I

- Stop eating processed food (condiments and yogurt still fine, but absolutely no more High Fructose Corn Syrup)

- Stop drinking soda and juice

- Limit milk (or drop it completely if you're fat)

Phase II

- Consume more meat

- Improve the quality of carbohydrates (single-ingredient sources like oats, rice, and whole grain stuff along with obvious tubers/fruit/veggie)

- Increase water intake

Phase III

- Increase quality fat intake (coconut and olive oils, nuts, butter, etc.)

- Get consistent with eating times

- Time food intake with respect to training

Phase IV

- Reduce the gut irritant carbs (like wheat, noodles, oatmeal) and get carbs primarily from tubers, fruits, and veggies

- Speaking of veggies, eat more of them

- Stop eating chemical and artificial sweeteners

Phase V

- Transition into better meat sources (grass fed, enriched Omega 3s, etc.)

- Adjust macros for goals (long-term)

- Learn to adjust macros for body fat and weight changes (short-term)

Phase VI

- Tweak specifics for health (e.g., improving insulin sensitivity to decrease blood pressure)

Progressing through these phases will clean up food quality, encourage protein intake, decrease carbohydrate intake, and increase quality fat intake – the premise of any Paleo based diet for most trainees.

We've talked a lot about how to do the diet, but Chapter 5 will teach you how and when to cheat, drink alcohol, and provide tips about food preparation.

Chapter 5 – Tips and Other Stuff

Now you should have a good idea of how to use the Paleo diet in the context of training for performance. This chapter contains random, yet helpful information that doesn't necessarily fit into any of the other chapters.

How to Cheat

I want to point out that I dislike the term "cheat meal" since it creates an image of someone whipping themselves for straying off the righteous path. In this case, cheat meals will represent a conscious partaking of food or drink that have a debilitating effect on the body whether they contain grain, dairy, high amounts of carbohydrates, or alcohol.

Every one of us was exposed to the Western diet before transitioning into Paleo foods. At some point or another, we are going to crave those foods or encounter them in social settings. First we have to earn the right to cheat. If you are fat and unhealthy, then you literally and figuratively cannot afford to eat harmful foods. Wait until you are in check, whether that is based on body fat or a quantified health measure (blood lipid profile, blood pressure, etc.). Cheating regularly is only going to conflict with your adherence to a quality diet and probably will cause negative emotional consequences. Let me repeat: Get healthy to earn the right to cheat.

Now that is out of the way, let's get down to business.

Cheating Frequency

Part of the reason it's necessary to "get healthy" is because you need to remove things like gluten from your diet for four to six weeks to allow the digestive damage to heal – AKA lowering the systemic inflammation. If you are an unhealthy and inflamed person, then providing a gut irritant on a weekly basis will keep the system suppressed and prevent it from completely healing.

Let's assume that you've allowed this healing process to occur. My suggestion is to only have a cheat meal or day once a week. If you intend on going out for dinner and drinking with your buddies on the weekend, try and lump them together on the same day. Practically speaking, if you are on vacation or are celebrating a special occasion, you might "let loose" a bit more, but remember that each successive cheat meal or day is only going to reduce your recovery capabilities for training. At most cheat once a week. If you are particularly loose in your cheating, then commit to a time period (two to four weeks) of clean eating to help the system heal.

Protein and Fat Bias

Try to emphasize protein and fat intake with cheat meals. Craving burgers? Then load those bad boys up with as much meat as you can handle. Whenever I go to Five Guys, I get five patties on my bacon cheeseburger much to the wonder of the employees. Craving pizza? Than make it a meat-splosion pizza. The more protein you can get out of your meal, the better. Going to a nice steak restaurant? After you eat a bunch of bread and appetizers, make sure you leave room for that 24 ounce T-bone. And when you do have cornbread or dinner rolls, slather them in butter to get extra fat calories and to slow the absorption of the carbohydrates.

Plan for Training

Another useful way to cheat is to do it to support training. Instead of eating a high caloric meal randomly in the week, plan it so it occurs the night before an important training day. Your body will be saturated with calories and will aid in the normal recovery process to improve how you feel in the next session. The detrimental effects of eating low quality food won't be felt acutely – unless you get bloated or cramped after eating grains or dairy – but you shouldn't do it often enough to put your body in a state of sickness.

Inevitable carbs

When carbs are unavoidable, make the best of the situation. Do you have a selection of desserts? Go with the cheesecake since it is high in fat (in addition to being high in carbohydrates). Eating ice cream? Douse it with Magic Shell, which is made from coconut oil and high in fat. The fat will add calories for training recovery, but it also slows the carb absorption.

Fast Food

Sometimes you have to attend fast food joints. Personally, I hate them, but even I have had to use them in the past. Put a premium on protein. Going to In-N-Out? Get a burger with extra meat and cheese. If you were trying to "stay Paleo", then you could get it "protein style;" they'll wrap it in lettuce instead of putting it in a bun. Then you can get fries (potatoes) as your carb source instead of eating the bun. Back to cheating: one of the best fast food places is Chick-fil-A in the South. The chicken is tasty, and is actually real chicken (unlike stores like Subway, whose "chicken" is a weird concoction of sea weed and chicken). Personally, I still avoid bread when I cheat, so Chick-fil-A's chicken tenders and waffle fries can hit the spot. I have even eaten a triple whopper after a long day of tramping in the woods in the South because it has 71g of protein, 82g of fat, and only 52g of carbs for 1230 calories (it also has 1590mg of sodium,

which I needed after sweating a lot). However, a month later I got it again on a road trip and was *thoroughly* disgusted. Unless I've expended myself physically, I'd rather have a Paleo friendly meal at fast food joints than crap food. My opinion is that if you're going to cheat, don't waste it on crappy stuff like fast food, waste it on awesome stuff like glazed ribs, cheesecake, and…

Alcohol

I don't abuse alcohol very often, but I do enjoy it in almost every form: quality beer, wine, and Scotch whiskey. My mentality is that I'm not going to waste my time with poor quality alcohol the few times I do drink it. You – and some of my crazier friends – will disagree and only aim to get drunk. That's fine, but keep in mind that alcohol is debilitating to the system. It's something that your body has to metabolize, and if it's spending time on alcohol, it's not spending time recovering from training. The effects of high alcohol consumption depress the system and therefore open you up to getting sick, especially if you put a lot of stress on your body while the system is hungover. Now, every infantrymen ever will say that it's perfectly possible to do some hard training – like a forced road march – while hungover with no ill effects, but, I assure you, they are not human.

Most people can eliminate half an ounce (15ml) of alcohol in one hour. That's about one 12 oz (355ml) can of beer in an hour. The kidney eliminates about five percent of alcohol in urine, the lungs exhale five percent, and then the liver chemically breaks down the remaining alcohol into acetic acid. In other words, there are parts all over your body that are trying to get rid of the alcohol, and those parts are vital for normal systemic function. When they are working overtime, your system is experiencing a Macho Man Randy Savage level of "elbow drop"; it ain't doing well.

Now that you know what's at stake (mmm, steak), let's talk about implementation. Each gram of alcohol contains 7 calories. In my experience, this is mainly relevant to fat people since they have a propensity to easily put on fat. Personally, whenever I drink a lot of alcohol, I lose weight and feel like Christian Bale in *The Machinist*. If you know you are going to drink an impressive amount, then take extra water soluble vitamins (especially B and C) before drinking, and if you can, take them during and after. Hydrate throughout the night, but go ahead and plan for the possibility of pissing the bed. If you can eat with your meals, then you may decrease the effect the alcohol has at that moment and the next day. I've had trainees report that making it a point to eat carbs while drinking helps eradicate a hangover. Of course, this will be an individualistic thing, but I'm of the opinion that hearty meals with alcohol will keep the side effects down.

As you recover the next day, do your best to eat protein and fat rich foods, hydrate, consume vitamins and minerals, and avoid strenuous activity. If your system was already under-recovered, an acute bout of lots of alcohol may suppress the body to the point that you get sick. Germs that normally would be repelled by a healthy immune system will walk past your hypothetical defenses and cause a bunch of inflammation. Be aware of drinking alcohol within the context of your system's health.

Cheating Summary

Overall, keep the cheating to once a week at the most. If it increases beyond that, then it's no longer cheating and has instead become "habit". If this upsets you, then put everything in your life into context. If you're going to spend 5 to 15 hours training to perform well or look good, then don't foil that effort with bad decisions outside of the gym.

Reading Labels

In Chapter 2 I provided a list of foods and their average level of macronutrients. I have most of that information memorized because I've spent at least ten years reading labels. Before you spend money on a packaged food item, read the label. If you accept that food is a drug that initiates a hormonal response – good or bad – then you ought to have an interest in what ingredients your food contains. If there are words that you don't understand, then look them up. Often times they will indicate some sort of sweetener, chemical or otherwise. A common one is "maltodextrin", a food additive that is derived from starch – either from corn or wheat. It's completely pointless and only harms the consumer.

Another big name to watch for is "High Fructose Corn Syrup". You learned of its damage potential in Chapter 3, but you'll be surprised at how many foods contain this slop. Sweeteners and food additives are present only to take advantage of the consumer by either making the food sweeter or preserving it so the company can get the food to you. There shouldn't be many processed foods in your diet anyway, but if there are, make sure to read the label and avoid unnecessary ingredients.

Next, pay attention to the macronutrients: proteins, carbohydrates, and fats. Pay attention to the amount of each and how it will affect the meal you include that food in. For example, though you can find pure orange juice, you'll see on the label that an 8oz glass has about 25g of carbohydrates. Despite the "natural" or "Paleo" source, this liquid sugar will spike your blood sugar and cause a sharp insulin response. Or if you are in a gas station buying a protein bar, you'll want to avoid the bars that have less fat and more carbs. Reading labels can help you determine what will be optimal in the context of what's going on in your life.

Cooking Tips

Paleo naysayers are always over-burdened by a supposed lack of food. "If I can't have bread and fruit and dairy and this or that, then what *am* I supposed to eat?" Even though there is a context to consuming these items, there are still plenty of Paleo-friendly food items that can be explored.

One of my friends used to make plain ground beef and eat plain tuna. This will always disgust me. Not flavoring meat means you are blatantly not trying. At the very least you can buy premixed seasonings and pepper it on your meat before cooking it. It literally takes a few seconds and will cost several bucks for an entire container of seasoning. And there are so many styles of seasoning to use – think about all of the regions of the world, and now think about the type of food in each one. Spicy Mexican, Italian, Mediterranean, Himalayan, BBQ, Korean, Chinese, and Japanese styles are just some of the options. There are so many styles of food for you to use for cooking *one* cut of beef. Now consider the fact that all of those food styles can be used on different cuts of beef and even different animals – there are so many possibilities and all we're talking about is premixed seasoning packets.

I recommended researching the commonly used herbs and spices, making a list, and buying your own. That way you are ready to make most recipes, and then it will let you experiment using each of them with different types of meat. You can find guides online that tell you which herbs go best with what type of meat. At the very least your experiments can occur by sprinkling some herbs or spices on meat and cooking it in some olive or coconut oil on the stove. You'll learn what you do or don't like, and you can always have ketchup, hot sauce, or barbecue sauce (without HFCS, of course) to mask the flavor if you don't like it.

I have taken a liking to making spicy types of meat with either fajita seasoning with extra cayenne and crushed red pepper, or my own concoction with Lawry's Seasoning Salt, chili powder, cayenne, red pepper, garlic salt, and a pinch of an herb like oregano. It's not special; I threw it together one night by thinking about what flavors I wanted on the beef, but I had a concept of what the flavors meant by continually experimenting with the herbs and spices.

You can obviously bypass the experimenting process by following these things called "recipes." They are directions that *teach you how to fucking cook.* If you've ever been in a science lab – and you probably were in middle school – then you can cook. People who claim to not be able to cook are either lazy or husbands wanting their wives to do it. Note that you may need to tweak certain recipes to remove gut irritants or low quality food, but by now, you know all about these things.

Remember that meat can be cooked in a variety of ways – fry it on a pan, grill it on the grill, cook it in an oven with convection or broiling heat, slowly tenderize it in a slow cooker, smoke it in a smoker, or eat it with your teeth next to a still-beating heart.

Vegetables can be cooked in pretty much the same way, but add in boiling and steaming as options. Fresh vegetables are probably preferable because there won't be any potential for nutrient loss. And if you're into the whole brevity thing you can just put it in your mouth and chew to get it over with – this is quite effective with bagged spinach lettuce. Potatoes can be quickly and easily cooked if you poke holes in them with a fork, wrap them in a wet paper towel, and microwave them for four to five minutes.

Some other random tips for various food items:

- The taste for eggs can diminish quickly. Cook them in bacon fat and eat them with potatoes. I prefer a topping of ketchup or hot sauce. If you are getting bored, try salsa or barbecue sauce (but avoid HFCS).

- Mashed potatoes are easy to make. Skin the potatoes, boil them, then mash them with a hand or electric mixer. Add cream (which doesn't contain lactose) and butter. For sweet potatoes add cinnamon and nutmeg to taste. For white potatoes add black pepper and garlic salt. Mashed potatoes are a good way to make a lot of carbs for future meals.

- Garlic salt and black pepper go well on pork chops cooked on the stove. Eat with mashed potatoes.

- Cheaper cuts of beef will taste better if you don't burn the hell out of them. If cooking in a pan, sear each side and then cook for a few minutes. Personal preference will differ, but cheaper meats taste better in the "medium rare" category. Too rare and they are strangely chewy, and too done and they are too tough.

- If you cook with powdered pepper, turn the air vent fan on. If you don't, the pepper floating through the air will make you choke and cough.

- Avocados are one of the easiest food items to add to any meal. Cut them in half to make an oval (as opposed to cutting them through their "waist"), carefully use the knife to plop the seed out (the more ripe, the easier this will be), and then scoop the flesh out with a spoon. Mash with a fork and season if you want to make guacamole.

- Sweet potato hash is delicious with eggs and bacon. Cut the sweet potato up, cook in butter or coconut oil (bacon optional), season with cinnamon and nutmeg to taste. Especially good with Chipotle Tabasco sauce.

- Grilling adds tasty flavor to meat, but you'll need to marinade the meat in oil since you can't cook with oil on the grill. To get a smoky taste, use wood smoking chips.

Convenience Cooking

Life is hectic. You may not have time to cook up a sirloin and microwave a "baked" potato in the middle of the day. In this case, you need to prepare your meals ahead of time. There are a few options. The first is to prep the next day's meals at night. You can make most of the food as you make dinner and throw them in baggies or Tupperware containers. The second option is to pick one or two days a week and make several days' worth of food. This option necessitates cooking a lot of meat at once; most trainees will need to eat at least one pound of meat a day, so get used to cooking five or more pounds of meat at a time. Potatoes can be created in mass by chopping them up – in cross sections or French fries –

covering them in oil and seasoning, and cooking them in the oven for about 30 minutes at about 450 degrees Fahrenheit. Precooking potatoes decrease meal prep time in subsequent days.

The last option utilizes a crock pot. Most meat can be thrown into the cooker in the morning with seasoning, broth, stewed tomatoes, or just seasoning. The longer it will be in the cooker, the lower the setting you'll use (usually the options are keep warm, low, and high – you'll usually use low for day-long cooking). Obviously there are crock pot recipes, but don't be afraid to wing it with whatever you have in the house. If you intend on adding vegetables or potatoes, only add them in the morning if you want them to be mushy (put them in towards the end to maintain texture).

Eating On a Budget

I don't make a lot of money now, but there was a time I made even fewer doll hairs. Still, it's possible to eat quality, Paleo foods. And even if each grocery visit is a little bit more expensive, it will be cheaper in the long run because you'll avoid sickness and stay healthy – personally, I can count on one hand how many times I've been sick in six years.

Look for sales and deals. Instead of mindlessly picking out meat, do this thing called *shopping* where you look at prices and compare them to other products. Generally you can find meat at the store for fewer than four bucks per pound. Chicken is cheaper, though most people – including me – don't prefer it. Look for the best price per pound and do your best to vary the meat or cut selection based on your goals. Vegetables like spinach lettuce, broccoli, squash, and zucchini are usually the cheapest available. Olive oil can be bought cheaply, and you can find low priced coconut oils online. Potatoes are usually very cheap; I've seen sweet potatoes sold for under $.50/pound. *Note: If you don't live in America, your prices are probably much higher. Sorry, Australians.*

If you are truly on a tight budget, then avoid comfort foods and only buy what you need to fuel your training recovery and health. Dark chocolate almonds may sound nice, but spend money on the best quality meat, potatoes, fats, and veggies you can afford.

Frequent Travelers

Folks that travel a lot for work know that a consistent diet is very difficult. Still, if you know your minimum or maximum limits (see Chapter 4) for your macronutrients, you know how to approach each meal. Most breakfast places can make eggs, bacon, and hash browns; tell them to hold the toast. Most lunch places can give you a meat, a carb source, and a salad. Most dinner places can give you the same, but serving sizes are usually more robust. If a given meal doesn't have what you want or need, ask if you can substitute it. The worst that will happen is that they say no. Every time I eat at a restaurant, I politely

interrogate the waiter on what I can or can't order; I want the most food – specifically protein – for the least amount of money. Fat is usually easy to add at restaurants by asking for more butter, dressing, or olive oil.

If everything on the menu looks very weak, and you are trying to get a lot of protein, try the hamburgers. Most are at least six ounces (about 42g of protein) and are usually more like eight (56g of protein). Some restaurants won't add extra meat, but there are some places that will add another equal-sized burger patty for only a couple bucks. If you feel that you haven't had enough veggies – or your bowels have been unhappy – make a point to eat salads. The roughage can help avoid the "traveler's poo;" (a term I just made up) yet every traveler knows what I'm talking about.

The truth is that it's possible to eat clean while traveling; it's just harder to do. It's especially difficult when coworkers are slathering their faces with what you are trying to avoid. Before you leave town, make it a point to review your training goals. Then review how your nutrition goals fit in with that. Think about what each meal needs to consist of and aim for that. If someone is diligent, the quality isn't so much a problem as the quantity; it's just hard to eat five big meals a day while traveling. Eat as much fat and protein as you can and buy relevant snacks (beef jerky, almonds, or even protein bars). Do your best when you do eat, and then make it a point to improve upon the quality or quantity when you get home.

Timing Food Intake for Training

The shortest amount of time that macronutrients will be available for bodily use is 45 minutes; this standard is achieved by looking at orange juice's effect on blood sugar. As a side note, it absolutely baffles me when Flex magazine says orange juice is a slow digesting carb when it is not only the standard for fast carb digestion, but the very item fitness professionals are taught to give people suffering from low blood sugar in the gym! Avoid conventional wisdom for everything forever. This means that you'll want to consume your pre-workout nutrition 30 to 60 minutes before the session. If you want the effect when you start the session, go with 60 minutes. If you want the effect to kick in during the session, consume the items closer to the start of the training session. In reality, you probably aren't going to "feel" a significant difference, but your body will move into an anabolic, or muscle building, environment, which will facilitate recovery.

Aim to consume quality protein with carbohydrates. Avoid fat as this will only slow the absorption of the protein and the carbs and blunt the insulin spike, which is what we're after while training. This is why the Muscle Milk brand of whey protein isn't useful; it has at least several grams of fat to improve flavor, yet the fat will slow absorption.

Protein should be at least 30g, and more like 50g pre and post workout. Most people should probably corral their carbs to be equal that of their protein intake, but some sources recommend doubling or tripling the carb intake post-workout.

My opinion is that there is far too much emphasis on pre and post workout nutrition. Most everyone reading this won't accomplish more important tasks like hitting their daily protein minimum, staying hydrated, or sleeping for at least eight hours a night. Set your body up to optimally perform because all of your habits are good instead of relying on a single shake or meal. My primary recommendation for training well acutely is to make sure there are two or three quality meals before the training session. If you're following the advice of this book, your meals will be high in protein and fat, and have an appropriate amount of carbohydrates. If you consume a meal like that a few times before training – and you are consistent with nutrition, hydration, sleep, and other things – then you will be well prepared for training. **Let this be a lesson for all performance training – focus on the big picture first before worrying about the minutia.**

Carb Intake Tweaking

There are many diet protocols in the world that put a premium on tweaking when carbohydrates are consumed. Remember that my general advice is to have consistent nutrition habits with quality foods; doing this will often eliminate the need for fiddling. However, I personally have tweaked carb intake and feel that it has helped me maintain a low body fat percentage.

There is a common, time-tested method that has risen out of bodybuilding that says, "consume carbohydrates earlier in the day and avoid them in the evening." This provides a bit of a "carb fast" overnight. This does several of things. First, it likely decreases the total daily carbohydrate intake – especially within the context of a regular "American diet." The lower total daily carb intake will have a positive influence on body composition by storing less body fat or glycogen. There are studies that show that glycogen stores are dependent on carbohydrate intake; eat more carbs, store more carbs. Glycogen also requires water in order to be stored. For every one gram of carbohydrate, there can be two to four grams of water stored. As lifters, we've heard the phrase "losing water weight" in reference to cutting weight for a meet, and the glycogen and water relationship is what is being manipulated. Lifters cutting weight not only decrease their total carbohydrate intake but increase their water intake so that when they decrease the water intake the day before the meet, their bodies are accustomed to the increased water intake rate and urinate most of it out with the assumption that more water is still on the way. It's not uncommon for lighter body weight lifters to lose up to 10 pounds with this method; they do so because they reduce their glycogen stores – thereby lowering how much water is stored – and increase excretion via water manipulation. The "daytime carbs, none at night" method probably takes advantage of this principle by lowering total glycogen levels and subsequently the body's water stores.

Secondly, the "daytime carbs, none at night" method is one way to improve insulin sensitivity in most people. Insulin sensitivity is a complex issue that we touched on in Chapter 3, but generally the less sensitive someone is to insulin, the less efficient they function and the more fat they carry. It's likely that the "daytime carbs, none at night" method will have a beneficial effect on insulin sensitivity, especially

for people that abuse carbohydrates, because it creates a period of time where carbs are not consumed. While insulin will be secreted with protein foods, leaving out carbs for twelve hours a day probably results in less insulin used in the no-carb time period.

Third, the "daytime carbs, none at night" method usually puts an emphasis on eating the carbs around the training session (assuming the session is in the morning, afternoon, or early evening). In theory, this is supposed to utilize the "insulin hit" of increased carbohydrate consumption. Carbohydrates play the largest role in insulin secretion, and insulin is a very anabolic hormone. Anabolic, or anabolism, describes a metabolic process that creates molecules from smaller units. In this case, it is a synonym for the "growth and repair" of musculature after training. By consuming carbohydrates around the training session, it is supposed to put the body in an optimal state to perform and recover. Yet if the trainee is not sensitive to insulin, then the intended effect is blunted; maintaining sensitivity to insulin is necessary to take advantage of anabolic capabilities of carbohydrates.

Some internet "broscience" practitioners will claim that the "daytime carbs, none at night" method depletes glycogen stores. This isn't exactly the case; it takes marathoners several hours of near maximal speed running to deplete their glycogen stores. A lifter isn't depleting his glycogen stores by sweating for a few squat sets, watching Netflix, and then going to bed. Besides, if we were depleted of glycogen stores, we'd be crapping our pants like the marathoners. Whether or not a trainee is affected by a temporarily-decreased carbohydrate intake will depend on his insulin sensitivity, routine, and minimum carb intake. For example, if the trainee is used to frequent meals with carbohydrates and recently implements the "daytime carbs, none at night," and then tries to train the next morning while experiencing the horrendous mind-killing blood sugar crash, then of course he won't train optimally. Nutrition, just like strength programming, is dependent on what the trainee is currently adapted to.

There are other methods of consuming carbs. The polar opposite of the "daytime carbs, none at night" is "carb back-loading," which states that carbs are consumed only at night and around the late-day training session. I would argue that this is taking advantage of the same arguments I made above about amount of carbs consumed, improving insulin as a result, and focusing on eating carbs near the training session. Does it matter when the carbs are eaten? I don't know. But it probably helps that they are not eaten throughout the day.

There are other diet methods where food isn't consumed at all. "Intermittent fasting" leaves a small window during the day to eat food, and the rest of the day the person doesn't eat, or "fasts." You read that correctly: it tells people to not eat food…in America. Instead of getting into the specifics, I will make a blanket statement: intermittent fasting or similar diets are not optimal for performance. They may be optimal for having a low body fat percentage, but they aren't optimal for a lifter, an athlete, a soldier, or a strength and conditioning trainee. Not to mention they encourage a very odd eating pattern. Again, I prefer to teach people to have good habits that are sustainable throughout life. You may not make a point to eat two pounds of meat as you enter your 50s, 60s, or 70s, but the basic premise of the *Paleo*

for Lifters method – lots of protein and fat with carbohydrates to match energy levels – will remain the same.

As far as practically using "carb tweaking" advice, I merely adjust my daily intake up or down based on what has been going on in my life. Have I trained harder or participated in more stressful outdoor activities (like hiking in the mountains)? Then I will eat more carbs. Have I had cheat meals that were rich in carbohydrates on Saturday? Then I might eat fewer carbs than normal on Sunday and even carb fast for the second half of the day. Do I know that I am going to pound the hell out of some desserts and bad food on Saturday? Then I might limit my carb intake on Friday too, so long as it isn't detrimental to my training. There is no good rule book on carb tweaking, but it is based on: a) the amount of carbs you generally need for your size and activity level, b) the recent training or activity history, and c) the recent nutrition history. The intake can deviate up or down from the average based on training or food intake.

Note that this is more relevant to lean trainees or weight class lifters who are trying to maintain a body weight. An LEO officer may not want to creep above 220 pounds of body weight since it lowers his conditioning capability, so if he has wings and beer with the fellas followed by cake with the kids, he would probably want to tweak his intake the next day to offset the high amount of carbs he took in. There's not much more to it than that.

Importance of Hydration and Sleep

I tell trainees that if they train hard in the gym, but don't recover well outside of it, then they aren't maximizing their efforts. "Outside of the gym stuff" includes mobility, managing mental or emotional stress, nutrition, hydration, and sleep. The two categories that fit the scope of this book are hydration and sleep.

Water

The body primarily consists of water with "percent of body weight" figures ranging anywhere from 70% down to 50% in old crones. Most people only consider water intake when dehydration is possible, but it's much more important than that. Water is necessary for almost all reactions and enzymatic processes in the body; if you don't have plenty of it, then your body won't be functioning optimally.

Think about everything that occurs in your day. You wake up and try to have energy for work or school. You eat, train, do mobility, and sleep well to increase performance. Every one of those things will be hampered by a lack of hydration. Your food won't be digested as well, your energy levels will subside, your training won't be efficient, your joints, muscles, and fascia will be stiff and sticky, and you'll generally reduce the quality of everything you do during the day (including trying to lose body fat and

grow muscle). It's all a result of the normal chemical reactions in your body not working as well since they're scrounging for ingredients. If you're going to spend all this time caring about your training, then set yourself up to succeed.

Halve your body weight and drink at least that many ounces of water every day. If you weigh 200 pounds, then you'll aim for at least 100 oz.; this is about five bottles of water. Water intake is especially important when you're busy or traveling since you'll often forget to drink water.

While tea and coffee will satisfy water requirements, make a point to drink water itself. Chapter 3 told you why you should stop drinking other sugary and sweet drinks; it'll not only help with your body fat, insulin sensitivity, and health, but it'll contribute to your overall hydration and body efficiency.

Sleep

The first thing we should do is eliminate the possibility of "segmented sleep" from your brain. This idea puts an evolutionary argument on waking up for an hour or two in the middle of the night before returning to bed. Instead of addressing the argument directly, I'll side-step it by pointing out this poignant fact: most people are sleep deprived. The idea of reducing sleep is utterly absurd and completely ignorant given the fact that hardly anyone reading this sentence is in danger of having too much sleep.

Because sleep is in such short supply, we will also ignore petty arguments for sleep cycles and stages of sleep. The real issue is that most people simply need more sleep, and sleep importance only increases with people who train. Sleep allows for the body and mind to recover and recharge by allowing important neuroendocrine processes to occur — chemical and hormonal processes create an environment that heals and rests the system. By allowing this process to work effectively, the mind and body are better prepared to function.

Here is a short and not comprehensive list of things that a lack of sleep can have an effect on: gross and fine motor control, decreasing brain health and function (AKA cognitive ability), body fat accumulation, insulin sensitivity, reproductive or libido issues, greater systemic inflammation (since necessary processes to reduce it are not fully implemented), lack of muscle hypertrophy (AKA swollertrophy), and flat out not recovering from training. I shouldn't have to show you this list; everyone reading this knows they feel worse when they don't sleep.

We agree that sleep provides a neuroendocrine environment to optimally prepare for the next day, but we need to understand that sleep is not like a glass of water. If your "sleep glass" is empty, you can't just fill it back up in one night by sleeping a lot. Sleep is like a continuum; you need to get the proper amount and quality chronically to fully benefit from it. Think of it as a cave; every night you are deprived of sleep, you venture deeper into a twisting labyrinth. Getting one night of longer duration sleep will only move

you in the direction of the entrance — it certainly doesn't move you out of the cave. Commit to regularly getting at least 7 hours of sleep for mediocre results, but you actually need more than 8 hours of actual sleep (not 8 hours lying in bed).

There are two things that can get in the way of getting sleep: actually having the time to do it and falling asleep. The former is an issue of time management while the latter is a combination of hormonal control and stress. As for finding the time: if a productive, joyful life and optimally recovering from training are important to you, you'll learn how to manage your time. I can't do that for you. But I can give you some ways to improve the hormonal and mental side of things.

Cortisol is a hormone released via stress. The physical stress of training releases cortisol (and lowers testosterone), which is a trigger for a lot of other things to occur to bring cortisol back down. However, cortisol is also released when the mind and emotions are stressed. The body will function relatively in the same way, but the difference is that your physical stress has a clear method of healing whereas the psychological stress needs guidance. Mental relaxation or meditation leaves the scope of this book, but if you know you are constantly stressed, then I would suggest researching this topic. I've recommended specific relaxation protocols in consultations to the benefit of the trainees I worked with. Search for "progressive relaxation."

In simple terms, cortisol is supposed to be released in the morning and then taper off throughout the day (high fat meals for breakfast help its release in the morning). However, being psychologically stressed keeps it elevated into the evening, and elevated cortisol levels will interfere with the process of falling asleep. Progressive relaxation can be implemented while lying in bed, but ensuring you are not deficient of minerals — specifically magnesium and zinc — will help this process. Most people are deficient in these necessary minerals, and their importance only increases for hard training populations (see Chapter 4 for more on magnesium and zinc).

Here are some other common tips to prepare the mind for sleep as well as staying asleep:

- Some people are weighed down by the next day's tasks. Make a list with the feeling that every item on the list is moving from your mind to the paper. This frees your mind of worrying about it…until the morning.

- Avoid electronics within an hour of bed time. The bright screens have a negative effect on the eyes and brain.

- Read a fiction book. You should be reading often anyway, but typically fiction is preferable right before bed because it serves more as a story instead of an involved thought process.

- Rub a puppy's belly. This is scientifically proven to reduce psychological stress (seriously) and it will only increase the bond with your pup. If possible, rub two bellies at once.

- Meditate or perform progressive or autogenic relaxation. You can do this while under the covers, but don't touch yourself.
- If you're in a bind, satisfy your libido. Extra points if it's with someone else.
- Try to keep your room cool, typically under 65 degrees Fahrenheit.
- Try to keep your room completely dark. The less light, the fewer disturbances you'll have.

The easiest thing you can do to relax at bed time is to take big, slow breaths. You can imagine your inhalation as a wave washing over you and the exhalation as a wave receding down your body. I feel that this specific visualization helps prevent me from thinking about other random stuff. The more sensory perception you add, the more involved your brain is in this visual and the less likely you'll drift to other thoughts. Repeating a mantra like "peace" or "relax" can help. You don't have to visualize anything, but you should at the very least let your thoughts drift away. If you start thinking about something (like the Stay-Puft Marshmallow Man), then let the image of that thought float away. Think of your vision as a fish bowl, and your thoughts are just fish that may swim into view, but you will let them slowly float or swim away.

If you are new to relaxation techniques, be patient. I've been using them for at least four years and can spike my adrenaline and heart rate or decrease my heart rate and blood pressure significantly at will. Relaxation is a skill and it must be developed and practiced, just like your heavy squat or press. You have plenty of opportunity since you will get to do it every night as you fall asleep.

Chapter 6 – A Final Word

People are very sensitive with nutrition topics. Folks with crappy diets see the healthy folks as fanatical while the healthy folks see the crappy-diet-folks as death-riddled slobs. We stand apart from either side as trainees who eat for performance. *Paleo for Lifters* merely combines performance eating with food quality to make the body function as optimally as possible.

We eat enough protein to maintain or increase lean body mass, enough carbs to match our activity level, and enough fats to recover from training. We do this with an emphasis on food quality to make our recovery efforts as efficient as possible. When we are healthy and lean, we will occasionally partake in "non-Paleo foods" for either enjoyment or to further aid our recovery. Adherence to high quality foods is a given, but we must first get healthy before straying off the path.

The intention of this book wasn't to give you a comprehensive nutrition guide for every possible scenario or trainee, but to teach you the foundation of good eating habits. By understanding the basics of nutrition, why the Paleo model is optimal, how to implement the model within the context of training and goals, and various tips and tricks, you are well-prepared to improve your nutrition to achieve your goals.

Regardless of your goal, I encourage you to not only visualize the end, but to commit to the means of achieving it. "Success" is not something that a person ever qualifies for, but a state of mind that results from honestly striving for it. Losing body fat or increasing lean body mass is not easy; it is hard work. There will be struggles and hardships, but if you have committed to the process and expect these hardships, you will be steadfast in your resolve and not give in to cravings or lack of time management. You are fully capable of achieving your goal; I just want to make sure that you believe it before you start. If you run into trouble, ask for advice on the 70sBig.com comments (particularly the PR Friday post every week) or the 70's Big Facebook Fan Page. The 70's Big community can help lift your spirits and motivate you.

Train hard and eat well.

ABOUT THE AUTHOR

Justin Lascek holds a Bachelor's of Science degree in Kinesiology with an emphasis on Exercise Science. He holds a CrossFit Level II Certification and was on staff for the CrossFit Barbell Training Seminars and Starting Strength Seminars with Mark Rippetoe. He has coached and trained a variety of populations including: Special Operations soldiers from every branch of the military (including international teams), football, track, baseball, basketball, softball, and swimming athletes, paraplegics and cancer survivors, obese and skinny folks, injured trainees requiring rehabilitation, CrossFitters, Olympic weightlifters, and raw powerlifters.

Justin is the primary writer and owner for 70sBig.com and travels and teaches workshops on lifting mechanics and programming. He regularly coaches, consults, and creates programs for trainees, athletes, and soldiers.

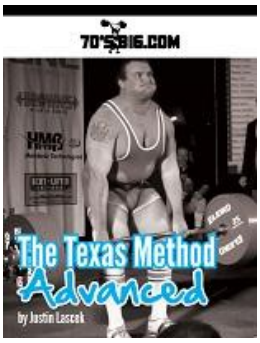
His approach to programming for fitness or performance revolves around strength training with barbells and using efficient high intensity conditioning. Justin played a year of collegiate football and competed at the USA Weightlifting Senior National Championships in 2010. He regularly trains and often performs experiments to gain personal experience for writing topics.

Justin enjoys reading, writing, adventuring, training, and playing with his two brindled American Pit Bull mix puppies.

OTHER BOOKS

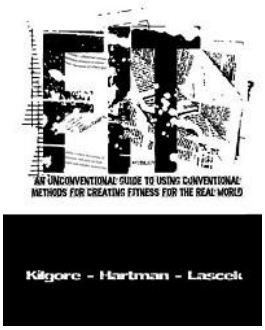
The Texas Method: Part 1

Released in May of 2011, this book details what kind of intermediate strength program the Texas Method is, how to transition into, how to adjust it to garner progress, and how to use it for various sub-goals. Learn more here.



The Texas Method: Advanced

Part 1 introduces the general outline of intermediate programming, but TM: Advanced teaches you how to control dosages of volume, how to structure the program for raw powerlifting, and a variety of important programmatic tweaks that will push you past sticking points. Learn more here.


AN UNCONVENTIONAL GUIDE TO USING CONVENTIONAL METHODS FOR CREATING FITNESS FOR THE REAL WORLD
Kilgore - Hartman - Lascek

FIT

Being "fit" means being strong and mobile with adequate endurance. This book is a no-nonsense general fitness book that can help trainees and athletes of any advancement. Chapters on the history, physiology, and effectiveness of proper strength and endurance training are followed up by chapters on how to program everything together based on the trainee's current state of adaptation. Barbell training and high intensity endurance training is hard, but it will make you fit. For more information and to purchase, please see FIT on Amazon.com.

CONTACT INFORMATION

Due to the high volume of e-mails Justin receives, he asks that you contact him in the comments of 70sBig.com, on the 70's Big Facebook Fan Page, or via the 70's Big Twitter.

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